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THE MONTH

The momentous question of admitting women to membership of the Pharmaceutical Society has been hanging about for nearly five years, and is to be kept boiling till the next annual meeting, when it will be offered to the society at large for decision. We doubt if the body of the trade cares much whether ladies are admitted to membership, or even to councilship or not. There are other subjects, as the council knows well enough, which attract a great deal more notice from the members generally, but which the council persistently shuts its eyes to. · After disregarding the expressed wishes of the last meeting as they have done, the council does well to entertain such a delicate regard for the resolutions passed on these occasions.

The Chemists' and Druggists' Trade Association report, a balance of over 800*l.* The Executive Committee are looking into a new case of alleged infringement of the Apothecaries Act. They have defended some adulteration cases, and they have arranged for the election of a new executive by the end of this year.

On November 7 the monthly evening meeting of the Pharmaceutical Society was held at Bloomsbury Square. Three papers were read. Professor Redwood told the details of a case of poisoning by yew leaves which he had been employed to examine. This excited considerable discussion. It was generally admitted that while the leaves and seeds of the yew have a decided toxic effect on the animal organism, yet the pulp of the fruits might be eaten with entire impunity. Mr. Rimmington contributed some observations on sweet spirits of nitre. He finds that the majority of commercial specimens, as well as those prepared according to the Pharmacopœia, do not contain nearly such a large proportion of the ethereal fluid as was generally supposed. He thought that the sp. gr. should be officially fixed at ·845, instead of ·850, as it is at present. Mr. Holmes read some interesting notes on casual drugs, which, as it dealt with facts and not with theories, could not be criticised or discussed.

The London Chemists' Assistants' Association, after some months of quiescence, has again shown signs of life. It has engaged a room at 76 Castle Street, Oxford Street, which is open from 6 to 11 p.m. on Wednesdays, Thursdays, and Fridays.

Professor Abel, the late President of the Chemical Society, has been nominated to the Companionship of the Bath. Dr. Playfair is said to be the only other chemist who enjoys that distinction.

The mineral water trade assembled in London last month in considerable force. They held an annual meeting, at which the subject of trade mark right in bottles was the chief subject of discussion, and this was followed by an "annual dinner." An exhibition of machinery and sundries was held in connection, and was a good representation of the main requirements of aërated water makers.

A paper on "Antiseptics and Disinfectants" was read before the Liverpool Chemists' Association on the 8th inst. by Mr. A. H. Mason, F.C.S. It gives a very clear view of the action of many of the most prominent of these, and we therefore print it in full.

Our correspondence columns contain several interesting contributions. Dr. Pope, president of the Homœopathic Congress, attacks the practice of adopting homœopathic results without acknowledging the homœopathic principle. Mr. James H. H. Howard, of Northleach, regrets that the Pharmaceutical Councils through its organ should have started on a mission of opposition to the cause of temperance; a commercial traveller advocates a pharmaceutical orphan asylum; Professor Tichborne, of Dublin, indicates very delicately the unanimity with which he was re-elected to the Irish Council; and Canine Toxicology and Illicit Pharmacy also draw forth remarks from other writers.

We are able to publish some valuable pharmaceutical notes on syrups, especially on syrup of the lactophosphates. These notes are written expressly for this journal.

An attempt on the part of the New Zealand doctors to make anyone but themselves liable to 50*l.* penalty if he or she should dare to "prescribe" has been defeated in the Colonial Parliament. New Zealand is not advanced enough for that climax of civilisation yet.

The Irish Pharmaceutical Council has published a financial statement for the year ending September 30, which shows a gain to the society on the year's transactions of rather more than 50*l.* The present balance in hand is 297*l.* 16*s.* 10*d.* The examiners have had before them 66 candidates for the Pharmaceutical Chemist license, and have returned fees to 23.

The Irish chemists have decided that the committee to arrange for the visit of the British Pharmaceutical Conference in 1878 shall be called the "Irish (not as usual the Local) Committee," so as to give a national tone to the affair.

The trade of the country appears to be rather better according to the October official returns, which show a general improvement in many branches. An advance in iodine is perhaps the most prominent feature of our trade report.

CORNER FOR STUDENTS.

Conducted by Richard J. Moss, F.C.S.

THE subject of the next exercise in qualitative analysis will be one of the chemical compounds of the Pharmacopœia. The substance is to be submitted to a systematic analysis, its composition and name ascertained, and a report made as to its purity.

Students who wish to compete should send us their names and addresses before the 20th inst. Samples of the substance will be forwarded on the 26th.

Students' papers will be received up to December 15.

Answers.

The white powder distributed for analysis in September was calcis phosphas B.P., containing 10 per cent. of calcium sulphate; in addition to this impurity, which was intentionally added, there were traces of aluminium, magnesium, iron, ammonium, and chlorine. The presence of several impurities in small quantities and of phosphates made this analysis somewhat difficult; on the whole, however, the papers which we have examined show that most of our correspondents have been able to contend with the difficulties of the case in a fairly satisfactory manner.

The application of the ammonium molybdate test for phosphoric acid often proves troublesome to the student, the principal precaution to be observed, as we have already pointed out, is to have the molybdic acid in excess, a condition that is certainly ensured by adding the liquid under examination to at least an equal volume of the nitric acid solution of ammonium molybdate. It is important also that no considerable excess of hydrochloric acid should be present. If only a small quantity of phosphoric acid is present some hours may elapse before a precipitate is visible. In the detection of small quantities of sulphuric acid it is not less important that time should be allowed for the formation of a precipitate, because, although barium sulphate is so slightly soluble in water that it takes nearly three quarts of water to dissolve a grain of it, in the presence of certain salts and of strong acids it is far more soluble, and small quantities are only very slowly precipitated. As a confirmatory test for phosphoric acid ignition of the solid substances with magnesium (or sodium) gives very satisfactory results. A small piece of magnesium (easily obtained in the form of ribbon) is introduced into the closed end of a narrow glass tube, and having been covered with a little of the solid in fine powder, it is heated in the Bunsen or blowpipe flame. If a phosphate is present magnesium phosphide is produced, and on crushing the mass with a drop or two of water, the phosphide is decomposed, its phosphorus uniting with the hydrogen if the water produces phosphuretted hydrogen, which is recognised by its peculiar and characteristic odour resembling that of garlic.

The student will find that the analysis of mixtures containing phosphates affords very good exercise, and it is important to be able to conduct such analyses with precision as they not unfrequently occur in practice, and they demand the exercise of a good deal of chemical knowledge. Phosphates enter largely into the composition of all seeds, they therefore form a large part of the ash of flour and of bread, the most important of our articles of diet. The chemist is not unfrequently called upon to pronounce an opinion on the purity of bread, and to ascertain if alum has been employed in making it, a problem that can only be solved with the necessary degree of certainty by making a careful analysis of the ash of the bread.

Prizes.

The First Prize, for the best analysis, has been awarded to **Donald Grant**, 80 St. Mary Street, Weymouth.

The Second Prize has been awarded to **A. E. Robinson**, 9 Bull Ring, Birmingham.

Marks awarded for Analyses.

Donald Grant (1st prize)	95
A. E. Robinson (2nd prize)	93
C. J. Bennett	91
H. J. Jackson	90
C. P. Lindler	89
Nil Desperandum	85
Aconite	80
Frederic	80
Gundulf	80
Amoba	75
J. P. Harold	70
Sigma	65
Cuprum	60
Experientia docet	50
Mg	0
Indefinite	0

TO CORRESPONDENTS.

⁂ All Communications should include the names and addresses of the writers.

Prizes.—The students to whom prizes are awarded are requested to write at once to the publisher, naming the book they select, and stating how they wish it forwarded.

Any scientific book that is published at a price not greatly exceeding half-a-guinea may be taken as a first prize.

Any scientific book which is sold for about five shillings may be taken as a second prize.

Nil Desperandum.—Your work is very creditable, and shows that very good results can be obtained with the most ordinary appliances.

Aconite.—Much care is required to distinguish between acidulated impurities and adulterants intentionally added; sometimes a quantitative analysis is necessary, but generally (as in this case) sufficient information may be derived from the qualitative tests.

Amoba.—Although you found calcium sulphate in the aqueous solution, you omitted to mention it as one of the impurities present. The other impurities are derived from the bone ash employed in the preparation of the salt and from imperfect washing of the precipitate, but the calcium sulphate could not be regarded as an accidental impurity.

J. P. Harold. You must have made the aqueous solution hastily, so that the calcium sulphate had not time to dissolve. You ought to have obtained an immediate precipitate on the addition of barium chloride, not a mere turbidity.

Sigma.—The white matter which you thought was an incrustation on the charcoal was probably the ash of the charcoal, which often resembles an incrustation. When igniting a solid in the closed tube, you must be careful not to mistake a dewy deposit of finely divided moisture for a solid sublimate, which it often closely resembles. The group reagents, hydrochloric acid, sulphuretted hydrogen, ammonia, ammonium sulphide, and ammonium carbonate must be added in succession to the same solution, precipitates if produced being removed by filtration. If you employ a separate portion of the liquid under examination for each group reagent, all sorts of confusion will arise.

Cuprum.—The acidulous radicals are not less important than the metals. You appear to consider that they are scarcely worth looking for.

Experientia docet.—Very slowly sometimes. You must have conducted your analysis in a careless and slovenly manner, or you should certainly have obtained a precipitate with ammonium carbonate.

Mg.—When you added ammonium chloride and ammonia to the acid solution you must have observed that a copious white precipitate was produced, in comparison with which the precipitate of aluminium hydrate which you afterwards obtained was a mere trifle. You may, however, have omitted to make certain that ammonia was in excess.

Indefinite.—Very much so indeed. In examining an acid solution you must remember that, on the addition of ammonia in excess, certain phosphates and other salts which are insoluble in alkaline liquids are precipitated. The presence of these substances necessitates a special mode of treatment, which you will find described in any text-book of analysis.

Pharmacalia.

Always a pleasant thing it is to chronicle the social advance of a purely scientific man, and to note the public recognition of his services. Professor Abel, so well and favourably known to many of our readers as the late President of the Chemical Society, has been nominated to the Companionship of the Bath. Science does not gain many of the honours of the State, and therefore the new C.B. is specially to be congratulated. It is stated in the daily papers that there is only one other chemist, the Right Hon. Lyon Playfair, who enjoys a similar distinction. The same title has been already awarded, however, to the botanist Sir Joseph Dalton Hooker, who has returned in perfect health from his American expedition laden with the botanical spoils which he brings with him from Colorado. Many chemists still retain a grateful recollection of the kindness of Professor Abel when he gave his hospitable reception at the Woolwich Arsenal, and laid the whole of the splendid resources of that establishment under the inspection of his guests.

His long researches into the chemistry of explosives and his experiments on military gun cotton have contributed to procure him the present honour.

Pyroxylin, such as is adapted for the preparation of collodion, we need not inform our readers, is a lower nitro-substitution product of cellulose, which, while it dissolves readily in a mixture of alcohol and ether, is not applicable to military purposes. It will explode, however, under certain circumstances at an uncommonly low temperature, as the elder students at Bloomsbury know to their cost. We have a vivid recollection of the results of an explosion which was as unfortunate as it was unexpected, and which was caused by the shifting of a basin. The trinitrocellulose, insoluble in mixed ether and alcohol, is the true gun cotton. From the day when in 1845 Schönbein treated cotton wool with strong nitric acid, and kept his secret to himself, to when Otto and Böttger independently hit upon the same discovery, and the former published it to the world, various processes of manipulation have been essayed, chiefly based upon the joint action of a mixture of strong nitric and sulphuric acids.

Gun cotton had strong recommendations: it left no residue when exploded; it burnt without smoke; it was exceedingly powerful as an explosive agent. It had strong defects: its power seemed under no definite control; it blew up in a disastrous manner; and the gravest accidents attended its manufacture. Mr. Hall, whose experience in the making of gunpowder was undeniable, attempted, in common with others, to produce the new destructive, but he was compelled to abandon the project.

We cannot follow the steps of the gun cotton industry; suffice it to say that elaborate and successful experiments have been made by General von Lenk, who brought the matter before the notice of the Austrian Government. Professor Abel's investigations were directed to the combustion of gun cotton. He found that when gun cotton in the form of a loose twist laid double was ignited by a platinum wire in highly rarified atmospheres it burnt very slowly, and in a smouldering manner: the rarifaction requisite depended upon certain ascertained conditions. Gun cotton so ignited exhibited distinct luminous appearances. In highly rarified atmospheres combustion was indicated by a beautiful green glow or phosphorescence; increase the atmospheric pressure and a faint yellow makes its appearance; increase the pressure still more and the pale yellow flame increases in size, and eventually obliterates the green; under still greater pressure the cotton burns with the ordinary yellow flame. Experiments were also made under gradually diminished pressures, oxygen being used instead of air. There was an instantaneous explosion until the pressure was reduced to 1·2 inch; from this pressure to that of 0·8 inch it burnt with a flash, but not instantaneously; below the pressure of 0·8 inch it underwent slow combustion. It was found that slow combustion of gun cotton in the form of twist might be effected in a powerful current of atmospheric air if the cotton threads be confined in a narrow glass tube. Professor Abel, therefore, came to the conclusion that advantage might be taken of the facility with which the combustion of gun cotton may be modified, and he even succeeded in making fusees and slow matches which were accurately regulated, though composed of this seemingly intractable material.

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The last time we had the pleasure of seeing Professor Abel was when he took the chair at the Institution of Civil Engineers, at Great George Street, Westminster. The occasion was a lecture by Professor Graham Bell on "Researches in Electric Telephony." The Institute can boast of a noble lecture room, which was filled to overflowing. The mysteries of the telephone, and how it had its transmigration from most complicated apparatus to the simple instrument now in use, were most effectively illustrated by an arrangement of diagrams thrown upon a white screen. It was quite clear that, however beautiful may be the applications of the electric current to acoustics, as now demonstrated, we are on the verge of important physical discoveries, which may give a character to our age. Many phenomena were described by the Professor to which as yet we have no clue, and those amongst us who are physicists as well as pharmacists have laid open before them a widened field of investigation.

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It is somewhat disappointing to leave these crowded assemblies and to come to the still waters of an evening meeting at Bloomsbury. Still only, be it clearly understood as far as attendance was concerned on Wednesday night (November 7), when an admirable discussion was carried on in the presence of the scantiest audience. The table was filled with a fair array of specimens presented to the museum, amongst which was a contribution from Dr. Dymock. We would note the effective way in which the specimens were mounted—in convenient, handsome-looking bottles, of which the Society need not be ashamed—each being accompanied with a bold descriptive label. Mr. Holmes, the curator, to whom probably we are indebted for their general appearance, made verbal comments upon sundry specimens. He must pardon us the remark that the habit of individually speaking to the chair prevents the audience from following the tenor of his observations. Amongst the specimens were samples of Chaulmoogra oil, described in Hanbury's "Notes on Chinese Materia Medica." They enjoy a certain reputation for the cure of leprosy, the seeds being used internally, and the oil as an external application. Professor Bentley enlarged upon the value of the collection, both as a means of comparison and reference, and as an aid to those who were engaged on the literature of the subject. He thought, moreover, that a great society like our own, though it could not hope to represent universal pharmacy, should yet have in its possession a complete series of the "Materia Medica of America and India." If we apprehended his meaning rightly, he proposed that such collections should be independent and distinct, and that they should completely illustrate the Pharmacopœias of the above-mentioned countries. He was also satisfied that our therapeutic range of Materia Medica might be extended with advantage; and that English practice would reap the benefit of the introduction of several new remedies.

The cultivation here and elsewhere of medicinal plants was always a favourite theme with the late Daniel Hanbury. He pointed out the injury done to commerce and to medicine by a wasteful method of collection; and he showed also the marked improvement that might, and had, sometimes been effected by intelligent culture. Amongst other plants, his attention was directed to ipecacuanha on account of its enormous increase in value, due either to the extirpation of the plant from old habitats, or from its being a monopoly in the hands of a few holders. The idea was not abandoned. It was naturally thought that ipecacuanha, belonging as it did to the cinchonaceæ, might flourish under similar conditions to the cinchonas. Indeed, it was a fair inference that if one exotic plant growing in a wild state might be successfully introduced into British India, the cephælis ipecacuanha might be transferred from Brazil and also cultivated in India where it was in large demand. Accordingly it was tried in Calcutta, Madras, and in Trinidad (West Indies). Ten years ago the enterprise was not hopeful, neither was the first introduction of cinchona; but while the latter has since proved successful the cultivation of ipecacuanha has turned out a failure. Dr. King, of the Royal Botanical Garden, Calcutta, has just sent in his annual report, in which special allusion is made to the introduction of foreign economic plants. The ipecacuanha plant has been distributed to Ceylon, Singapore, Burmah, and the Andamans; and it appears that it is unsuited for general cultivation in India. The first reason given is the peculiarly slow growth of the plant—the European planters are only temporary settlers and not colonists, and consequently they are not likely to be interested in crops which yield slow returns. Secondly, the plant has "an insignificant and straggling appearance," by no means in its favour or calculated to kindle any enthusiasm in its behalf. Lastly, the winter season is too cold for the tropical character of the plant, and as a commercial speculation it does not pay.

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Pharmacists engaged in literary work are troubled not unfrequently with the quality of their red ink. We have often wondered, the wonder being prompted by regret, that the solution of carmine in liquor ammoniæ should more or less speedily lose its deep crimson colour, and so cease to be useful for marginal notes and manuscript correction. It appears that this is in consequence of the alkaline properties of the ammonia, a basic compound being formed with the cochineal pigment. A method of avoiding this is given in the *Polytech. Notizblatt*, and, as far as we can judge from recent experience, promises to be successful—triturate one gramme of pure carmine with 15 grammes of liquor ammoniæ acetatis, and equal parts of distilled water; let it stand. A portion of the alumina which is combined with the carmine is taken up by the acetic acid of the ammonia salt, and separates as a precipitate. The pure cochineal pigment remains dissolved in the half-saturated ammonia. Filter and thicken the solution with strong simple syrup. Gum arabic must not be employed for thickening on account of the solution still containing some acetic acid, which would coagulate the bassorin.

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What may be the nature of the poisonous principles contained in yew leaves was the subject of Professor Redwood's paper at the last Wednesday evening meeting. There is a popular impression that the leaves are innocuous when eaten off the tree, but become poisonous by a certain process of fermentation when allowed to remain upon the ground. The idea is rejected upon good authority, and, as far as toxicological literature is concerned, it is believed that the fleshy pulp of the fruit of yew is harmless—that the seeds contain a poisonous principle very sparingly soluble in water, while the leaves and young shoots are narcotico-acrid poisons, both as regards men and animals. A case in which yew tea proved fatal having come directly before Professor Redwood's notice, be was led to commence a series of chemical experiments in order to gain more definite information on the matter, some of the results of his research being now laid before the public. The wife of a railway porter, having had a very difficult previous delivery, was induced, with the concurrence of her husband, to resort to the use of a decoction of yew, when confined a second time. The case was peculiar; the man and wife were both thoroughly respectable and respected; there was no suspicion of foul play, no attempt at concealment, no mystery in the transaction. Yew tea was a popular therapeutic agent amongst the class of persons to which they both belonged. The preparation taken by the woman was a decoction which had been boiled for some length of time. A large handful of twigs and leaves had been put into two quarts of water—probably six ounces of materials. Two or three doses were taken without effect. The following day two similar doses were taken—still no effect; therefore, to the last dose some chopped-up unboiled leaves were added. At one o'clock in the morning the wife awoke her husband; she was retching, and felt ill. The husband gave her some cold water, and went to sleep. Waking about an hour later, he found his wife breathing heavily. Seriously alarmed, he called in medical assistance; the doctor came, and the wife was dead.

Necessarily the circumstance had to be investigated before a coroner, and before a bench of magistrates. The evidence was clear. The face of the deceased wore a calm expression an hour after death: there were no sinister indications of violence, no distortion of the limbs. A post mortem examination revealed a generally healthy condition save in the region of the heart, but the doubt had to be set at rest as to the exact cause of death. The decoction taken was examined, and proved to have been made from yew: green yew leaves diffused in the contents of the stomach were identified. The inner surface of the stomach presented an appearance of slight inflammation. Where a compacted mass of digested green leaves, about half an ounce in quantity, was found, there was a similar inflamed condition. Analysis detected no other mineral or organic poisons, but spirit and ether separated an oleo-resinous matter similar to that obtained from yew leaves.

Experiments performed on a strong rabbit gave identical results, death ensued in five hours, apparently without a struggle and with no sign of pain: nor was there any detail to upset the conclusion drawn that the poisonous effect of yew leaves was the cause of the disaster. It becomes, then, of great physiological importance that we should know something more of the therapeutic agency of yew leaves. Pereira stated that the yew held an intermediate position between savin and foxglove—and that, unlike digitalis when used for medicinal purposes, it did not accumulate in the system. Yew appears to contain a volatile oil and an amorphous alkaloidal substance, which has been isolated under the name of taxin. To the oil may be ascribed the property of savin; to the alkaloidal substance, that of foxglove. Mr. Williams, the President, was of opinion that the mere infusion was practically inert—and that the active agent would probably turn out to be an oleo-resinous body, not soluble in water, in chemical reactions similar to Euphorbium. Taxin might be one of those resinous acids of extreme potency like scammonin and jalapin. Professor Redwood was not prepared to say that taxin was a true alkaloid, and the President reminded the audience, in summing up the discussion, that the alkaloids acted mainly on the nervous system: here, and in other cases, it was clear that the poison of the yew was of a local character, and had produced local inflammation. This being the action exerted by the irritant oleo-resinous bodies, it was fair to surmise that taxin might be placed in that category. Professor Bentley warmly advocated further investigation, the matter being not only of pharmaceutical importance, but of special moment to veterinary surgeons, whose absence from such a discussion was to be regretted. With his former pupil, now his colleague, Dr. Trimen, he had summarised, as far as possible, existing information in "Medicinal Plants." An analysis had been made of the fruit, which showed that the external covering was innocuous, though the seeds were poisonous, containing a bitter resinous principle—not called an alkaloid. Lucas analysed the leaves and found in them a white amorphous bitter powder. Marmé published a paper in the *Journal of the Chemical Society*, in which he gave a method for obtaining it, and distinctly called it an alkaloid. In presence of such conflicting statements further research was to be desired. Pereira's statement as to the medical effect of yew had been already quoted: and a most valuable addition to therapeutics would be obtained if it were true that it possessed the sedative effect of digitalis apart from that cumulative quality which rendered the foxglove preparations dangerous.

To this we would add our satisfaction at the contemplated introduction of a non-cumulative powerful sedative. It has been our experience to have witnessed the exhibition of digitalis under most distressing associations. We have, in fact, been led to recognise its presence in a physician's recipe with personal misgivings and apprehension. In no case where we were able to trace its effects simply as a dispenser could we prove a final favourable result; in other cases, three specially which came under our immediate notice, the patient died suddenly and without warning. It is not for a pharmacist to decide between the inevitable issue of a diseased state of heart and the cumulative power of a drug, but we may be excused for never seeing the word digitalis without foreboding uneasiness.

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When the Professor of Chemistry had finished talking botany, and the Botanical Professor had done with chemistry, a brisk little word warfare sprung up about sweet spirit of nitre. Mr. Rimmington considered that a spirit containing 4 or 5 per cent. of nitrite of ethyl was a fair standard strength for medical use. The British Pharmacopœia process in his hands had not yielded such a spirit, and as to ordinary commercial specimens, the less said the sooner mended. Some samples contained only a fraction of 1 per cent., others none at all. In one instance he examined what seemed a weak solution of aldehyd, and occasionally the small quantity of ether that might originally have been present had vanished by decomposition or had perished in a watery grave. The sp. gr., he held, should not be higher than ·845, and the old manufacturing process of drawing over as much distillate as there had been alcohol introduced into the still, might probably account for the deficiencies observed. In his opinion "the great proneness of this preparation to change is largely indebted to the presence of water and of some oxidised accompanying compounds, the contents of the retort being in such a state of hydration as to be unable to form nitrite of ethyl."

Our own theory has been that the hydration observed may have been partially derived from the hydrant kept by some of our esteemed brethren on the premises, the containing vessel being labelled "aqua destillata." We have for years directed the manufacture of this spirit, and by steam heat have got over as much distillate as would come, but a definite and appreciable quantity was left behind. The whole of the distillate being transferred to a glass receiver was allowed to stand for twenty-four hours on a certain quantity of potassium carbonate, and then redistilled. The British Pharmacopœia process was no then invented, and we had no inducement, as far as home consumption was concerned, to alter the ancient practice.

Scarcely had Mr. Rimmington finished the reading of his paper when there were signs of evident non-concurrence. Professor Attfield wanted to know in what way the conclusion had been arrived at, that the distillate obtained on heating sweet spirit of nitre in a retort was wholly nitrite of ethyl? It had been stated that when the calcium chloride test was used, if 2 per cent. of ethereal liquid was obtained, it might be considered that 10 per cent. of that same ethereal liquid was present in the sweet spirit of nitre. He did not know himself what was the composition of that ethereal liquid. Having made scores of experiments in the way indicated by Mr. Rimmington and otherwise he had not been able to come to a conclusion what spirit of nitre was formerly, what it was now, or what it ought to be in the future; nor did the Pharmacopœia venture on any more definite assertion than that it was a spirituous solution containing nitrous ether. Professor Redwood felt that the British Pharmacopœia description went as far as they might safely venture. He defended the process therein enjoined, for it gave a product uniform in its character, and obtainable with ease and certainty. Sweet nitre was an established remedy, accepted by the public, and of great remedial value. So long as it was universally demanded it must be manufactured, and it would continue to be prescribed. It became the duty, therefore, of the authorities to supply a process which would enable the manufacturer to produce it in a definite condition.

Some time ago (say about fifteen years), when the Professor brought forward and explained the now British Pharmacopœia process, a gentleman (we suggest Mr. Carteighe) came up to him afterwards and said he thought it was a very nice process, but there was one defect in the account, namely, that he had not clearly explained the nature of the decomposition and reaction that took place, nor the composition of the product which was obtained. To that imputation he pleaded guilty, and his answer was that he should be very glad to give the explanation if he had possessed the knowledge. All he knew was that he got a definite result. It contained nitrite of ethyl, aldehyd, and other compounds, but in what proportion it was difficult to say. Always, however, it contained the same proportion of the same ingredients.

Mr. Williams defended Mr. Rimmington, and thought that his critics had been somewhat unfair. The main point of his observations, and the really important one, was that he took a portion of sweet spirit of nitre, distilled from it a certain part, and from that fraction got a result which by a slight calculation gave him the composition of the original liquid. To quote Mr. Rimmington's own words:—"He took a four ounce flask fitted with a bent tube, and adapted it to a small Liebig's condenser. About 250 grains of fused calcium chloride were introduced into the flask, together with spirit. Distillation was then commenced, and the distillate collected in a 1,000 grain flask. The quantity distilled varied according to the quality of the spirit. If it were a strong spirit, such as that of the 1,747 Pharmacopœia, it would be necessary to draw over 300 grains before it all came over, but if it were a weak spirit, such as that usually sold, it would be only necessary to draw over 60 or 70 grains. He used the decem measure, which was easily converted into cubic centimetres if required. It was in fact a fractional distillation. It might be a question whether he got all the ether over, but this was proved by the fact that if distillation was carried further clean spirit was obtained, and sulphate of iron gave no indication of nitrous ether with what was left in the retort. There might be a small loss, but it was very small. He reckoned if he got 4 per cent. of nitrous ether from 100 grains of the pharmaceutical spirit he had lost 1, which would make 5. His results differed considerably from the statements of others as to what different spirits contained or should contain. For instance, Professor Attfield stated 10 per cent., but he had not found anything of the sort. He had found as small a quantity as 3 or 4 per cent. of ether."

Dr. Redwood's answer given above reminds us of an occurrence with the relation of which we must terminate the account of this episode.

We once went over Normandy with a north country farmer who wished both to travel and to improve his mind. He was anxious to learn the reason for any novelty in agricultural methods, and for him we acted as interpreter. Close by Avranches we came upon a remarkably small hay-rick—it stood alone and was homœopathic in its proportions.

"That is very well made," remarked the farmer, but I should like to ascertain from the proprietor his reason for making it so small. "I should have made my rick larger," was the reply elicited, "if I had only had more hay." We are afraid that our information often labours under the same embarrassment, and that there would be more of it had we a larger stock.

⁂

The ungenial weather has not damped the ardour, nor abated the contentions of the analysts.

Into that troubled region we shall decidedly not venture; it is simply our duty to call attention to the doubts expressed as to the sufficiency of the authorities at Somerset House to be constituted as a Court of Appeal. Recent circumstances have deepened those doubts, particularly a dictum pronounced on Burton ale, which stated that strong Burton beers contain about 60 grains of common salt per gallon, solely derived from the water, malt, and hops used. Naturally the Burton brewers resent the statement, and assure the world that the water used contains from 5·10 grains to 5·35 grains of chlorine per gallon; that no ale leaves the brewery containing 20 grains of salt per gallon; that in no case is there a concentration to one half, and that salt is not used nor any matters to form it. The general public, moreover, must be credited with common sense—the community at large is not likely to extend its patronage to a beverage which is nothing but a flavoured solution of sodium chloride. Meanwhile the wrath of public analysts is dire, and it has found full vent in the current literature of the month.

The Chemists' and Druggists' Trade Association.

Report of Committee Meetings.

Finance Committee meeting held at the office of the association, 23 Burlington Chambers, New Street, Birmingham, on November 2, 1877, at 10.30 A.M., Mr. Thomas Barclay, vice-president, in the chair. Present, Messrs. Churchill and Southall.

The secretary reported that the association had a balance at its bankers of 869*l.* 13*s.* 5*d.*, and that there were about 3,450 members on the register.

The secretary's cash statement, together with all books of account and vouchers, were examined and passed up to October 31 last.

Law Committee meeting held at the office of the association, 23 Burlington Chambers, New Street, Birmingham, on November 5, 1877, at 1 P.M., Mr. S. U. Jones, president, in the chair. Mr. Thomas Barclay, vice-president. Present, Messrs. Holdsworth, Jervis, Southall, and the solicitor of the association.

Letters were read from Messrs. Hampson and Reynolds, regretting their inability to attend.

The minutes of the previous meeting of the committee were read and approved.

The brief of arguments for the appeal in the case of the Apothecaries' Company *v.* Shepperley, drafted by the solicitor after consultation with counsel, was read and approved. The solicitor said he had retained three counsel to undertake the argument in the appeal, namely, Sir Henry James, Q.C., Mr. Buszard, Q.C., and Mr. Clement Higgins.

The solicitor then explained the steps that had been taken in the case of the Apothecaries' Company *v.* Wiggins.

The secretary reported that he had that day received a communication from a member resident at Bradford, in Yorkshire, stating that proceedings had been commenced against him by the Apothecaries' Company for alleged infringements of the Apothecaries Act, 1815, and that he was summoned to appear at the Bradford County Court on the 13th inst. The committee instructed the secretary to make full inquiries respecting this case.

The secretary said that in compliance with a resolution passed at the last meeting of the Law Committee, he had taken proceedings under the 17th section of the Pharmacy Act against three unregistered vendors of poisons, and that in each case the offenders were fined by the magistrates.

The case of a firm of chemists, members of the association, who had been summoned for selling soda water and cayenne pepper, said to be adulterated, was then fully discussed, when it was moved by Mr. Jervis, seconded by Mr. Barclay, and unanimously resolved:—

> That the solicitor be instructed to defend the members in the summonses taken out against them under the Adulteration Act, 1875, for the sale of soda water and cayenne pepper.

The secretary said it would be within the recollection of the committee that a scheme for organisation, prepared by him, was submitted to the general meeting of the trade in connection with the association held at Glasgow on September 8, 1876, when a resolution was passed adopting the scheme, subject to such modification as the Executive may deem desirable. The portion of the scheme relating to Scotland had been amended by the Scotch Committee, and confirmed by the Executive Committee, at its meeting on February 28 last. The remainder of the scheme was submitted to the Executive Committee at its meeting on May 25 last, when a resolution was passed leaving its consideration in the hands of the Law Committee. The scheme for England and Wales, as amended by the secretary, was then laid before the committee and approved.

The most suitable time for holding the first election of the General Committee and the best means of conducting the same was freely debated, when it was moved by Mr. Southall, seconded by Mr. Jervis, and unanimously resolved:—

> That the secretary be instructed to issue a printed copy of the scheme for organisation to each member of the association, with a circular and voting form, requesting him to nominate and vote for a member of the General Committee (or so many as may be allotted to the district in which he resides), as explained by the scheme the circulars, &c., to be forwarded to the members not later than December 10 next, with instructions that the voting forms must be filled up and returned to the secretary not later than December 31 next.

The secretary was empowered to engage the services of Messrs. Laundy, Harrison, Harris, & Caldicott, the official auditors of the association, to superintend the elections and declare the results of the same.

It was decided to publish the results of the elections in the *Pharmaceutical Journal* and The Chemist and Druggist early in January next.

Some discussion took place on the advisability of printing a report of the proceedings in the approaching appeal in the case of the Apothecaries' Company *v.* Shepperley, and forwarding copies to the members of the association, or to the whole trade, when it was moved by Mr. Holdsworth, seconded by Mr. Barclay, and unanimously resolved:—

> That a report of the appeal in the Apothecaries' Company *v.* Shepperley be printed and circulated to all chemists and druggists named on Kelly's "Chemists' Directory."

The Pharmaceutical Council.

At the November meeting eighteen members were present, the absentees being Messrs. Brown, Mackay, and Schacht.

Among the applications for election were two ladies, who, having passed the Minor, desired admission to associateship. It was stated in the course of the discussion that these ladies had especially distinguished themselves at the examination, having obtained a higher number of marks than any other candidate on the occasion when they passed. Their superiority was particularly noticeable in chemistry. Mr. Hampson moved their election, urging that whatever benefit was connected with membership of the society was as due to ladies as to any other person who fulfilled the conditions. The council might not be legally bound to elect them, because it had the power of refusal, but he thought it was bound in equity to do so, and it was with him a matter of conscience. Referring to the decision come to at the annual meeting a few years ago, he said, there were a great many young men in the background, and there was a vote, which he denied was a reflection of the society's opinion, somewhat adverse to the admission of women, but the council had scarcely any right to consult an annual meeting on such a question. If the council refused to elect these ladies they would not be keeping pace with the nineteenth century.

Mr. Hanbury, though he voted against the election of ladies as members, would not oppose them as associates. He did not want them as members of council or office holders.

Mr. Greenish seconded Mr. Hampson's motion, and the Vice-President and Mr. Shaw spoke in favour of it.

The President remarked that if ladies were elected as associates, they could not be refused as members.

Mr. Robbins thought the council was bound by the decision of the annual meeting, and must wait until their resolution should be rescinded before electing any ladies.

The President, however, argued that the council had only asked the society generally for advice. It could not, as the executive, delegate its duties to any meeting.

Mr. Owen acknowledged himself a convert, and would vote with all his heart for the election of the ladies.

Mr. Betty was virtuously indignant at the idea of the council repudiating the vote of the general meeting. They were as much bound to it as a man was bound to his wife by a marriage contract.

Messrs. Sandford, Atkins and Bottle spoke in favour of postponing the question to the next annual meeting. None of them expressed an opinion adverse to the admission of ladies. This course was ultimately taken, though first Mr. Hampson insisted on taking the votes of the council on his motion as it stood. The following was the result:—

For—Messrs. Churchill, Greenish, Hampson, Hanbury, Owen, Savage, and Shaw.

Against—Messrs. Atherton, Atkins, Betty, Bottle, Crackuell, Hills, Rimmington, Robbins, and Sandford.

Mr. Churchill suggested that the motion referring the question of admitting ladies to the annual meeting should be so worded as to express the council's regret at its inability to elect them.

Mr. Betty said if that were carried he should move that the next number of the journal be printed with a black border.

On the motion of Mr. Bottle, a number of amended regulations in reference to the Benevolent Fund were agreed to. These were mainly to give 35*l.* a year instead of 30*l.* to pensioners sixty-five years of age and upwards; to take the elections in December, so as to give votes to all subscribers during the year; to give subscribers abroad the power of voting by proxy; and to arrange that should any subscriber or donor, or the widow of any subscriber or donor, become a candidate for an annuity, such number of votes shall be placed to his or her credit, at the succeeding election, as shall be represented by the whole amount of subscriptions or donations to the Benevolent Fund he or she (or in the case of a widow her husband) may have contributed.

The council formally endorsed a recommendation of the Law and Parliamentary Committees that chloral hydrate and its preparations be added to Part 2 of the poisons schedule in the Pharmacy Act. This, therefore, now only awaits the confirmation of the Privy Council.

Provincial Reports.

BLACKBURN CHEMISTS' AND DRUGGISTS' ASSOCIATION.

The second annual meeting of this association was held at the Rooms, Church Street, Blackburn, on October 10, Mr. W. Farnworth, president, in the chair.

It transpired that there was a small surplus in the hands of the treasurer.

The president recapitulated some of the facts of the history of the association. It had originated in a desire on the part of the young men for such aid in their studies as an association was supposed to afford. Some wholesale houses had contributed liberally towards the formation of a library and museum. Messrs. Woolley, Sons & Co., of Manchester, had presented 5*l.* 5*s.*; Messrs. Hodgkinsons, Stead & Treacher, Messrs. Barron, Harveys & Co., Messrs. Langton, Harker & Stagg, of London, Messrs. Clarke, Bleasdale, Bell & Tollinton, of York, and Mr. Sibson, of Manchester, each contributed 2*l.* 2*s.*; Messrs. Newbery & Sons, Maw, Son & Thompson, and Bourne & Taylor, of London, Messrs. Ayrton & Saunders, of Liverpool, and Jas. F. Wilkinson, of Manchester, gave 1*l.* 1*s.* each; Messrs. Southall Brothers & Barclay, and Messrs. Evans, Sons & Co. each presented their well-known cabinets of materia medica, &c.; Messrs. Hirst, Brooke & Hirst presented Miller's "Chemistry." Science classes, presided over by Mr. Isherwood, had been inaugurated, and Mr. Whewell, F.C.S., had delivered three gratuitous lectures. The association now numbers twenty members, nineteen associates, and three honorary members.

HULL CHEMISTS' ASSOCIATION.

The annual meeting was held on October 18, Mr. C. B. Bell in the chair. The following are extracts from the annual report:—

During the session seven members have been elected, two have resigned, and one has died, leaving at the present time 55 members.

The first matter requiring the attention of the committee was the introduction of the suicidal policy of selling patent medicines and proprietary articles to the general public at reduced prices. This was commenced by a firm of grocers, with whom the committee were unable to deal. Had it, however, been confined to them, it would not have been of much consequence. Unfortunately, a chemist in the neighbourhood adopted the same plan, and it has been followed by some few others. Your committee have reason to believe that it has not been found to answer as expected, and would strongly urge all to continue selling at the legitimate prices, feeling sure that it will be found to be the best and safest plan in the end.

The chemistry class has been conducted by Mr. J. Baynes, F.C.S., borough analyst, at his laboratory, in Scale Lane. He reports that the session comprised a series of twenty lectures, attended by eight students, and that good progress had been made by those who attended regularly. The examiners, Messrs. J. F. Smith and Stoakes, report that five students competed for the prizes at the end of the session, Mr. T. Brown carrying off the senior, and Mr. Barlow the junior prizes.

It had been thought advisable that the following session should commence earlier. The class has, therefore, been inaugurated by an address from Mr. J. F. Smith, and from the fact that twelve students have joined already your committee feel justified in having commenced thus early.

Mr. Niven reports that the botanical class consisted of a series of 26 lectures, commencing on May 9, and terminating on October 5. Thirteen students attended, six of whom rarely missed a lecture, and the attention paid was everything a lecturer could desire. The competition for the herbarium prize, given by Dr. Sawdon, consisting of books to the value of 30*s.*, has been most satisfactory. Three students competed, all showing admirable specimens, the most important difference being in the number. Mr. T. Brown stood first, with a collection of more than 400 species, beautifully dried, mounted and arranged, scarcely one plant being wrongly named. It represented more than one-fourth of the flowering plants indigenous to Britain. Mr. A. D. Markham stood second in order of merit, with a collection of 310 species, equally as well selected and mounted as the previous one, only two or three trifling errors occurring in the naming. Mr. O. Lambert, the youngest competitor, stood third with a collection which, although inferior to others in point of numbers, consisted of 100 species, and was most commendable, and in former competitions would have taken a better position. Dr. Sawdon expressed himself as more than satisfied with the result, and for himself, Mr. Niven felt bound to endorse his good opinion in a practical way, by giving books to the value of a sovereign as second prize, and recommended the association to give a book of the value of 10*s.* for a third prize.

For the prize offered by Dr. J. H. Gibson to the student who passed the best examination in physiological botany, a sufficient number of students did not come forward, and it was therefore withheld.

The report further alluded to the action taken by the association either alone or in conjunction with the Chemists' and Druggists' Association (to which it was added the thanks of all chemists were due) in reference to the sale of opium under the patent medicine stamp; the opposition to Dr. Lush's Medical Bill, the milk of sulphur defence, and the counter prescribing case. Should the pending decision in the Court of

Queen's Bench be adverse (says the report) "your association will have more work before it immediately."

The financial statement showed a balance of over 20*l.* in hand.

The following gentlemen were elected officers of the association for the ensuing year:—

President.	Vice-President.
Mr. C. B. Bell.	Mr. G. Myers.

Secretary and Treasurer.
Mr. B. M. Stoakes.

Committee.

Mr. J. Bradley.	Mr. J. Oldham.
Mr. J. Grindell.	Mr. F. J. Smith.

MANCHESTER CHEMISTS' ASSOCIATION AND SCHOOL OF PHARMACY.

On October 10 this association held its ninth annual meeting at the Memorial Hall, the President, Mr. Councillor Brown, being in the chair. The report of the council showed that the falling off in numbers still continued. It was more noticeable in the attendance at the meetings than in the amounts of subscriptions. This increased the difficulty of the task of persuading gentlemen to read papers. It requires some burning question to excite the general interest and attention of the trade.

An innovation had been introduced in their sessional meetings. They had been held in the Memorial Hall, and tea had been provided. This item had cost 7*l.* 6*s.* 6*d.*

The work of the School of Pharmacy had been eminently satisfactory, both in progress and results. The numbers had been maintained, and the classes had proved more successful from a pecuniary point of view than had been anticipated. At the commencement of the session it was feared that it would be necessary to apply to the Pharmaceutical Society for a grant to supplement the lecture fees. This had not been the case. The fees had amounted to 91*l.* 10*s.*

The association had been represented at the Pharmaceutical Conference at Plymouth by Messrs. Benger and Siebold.

During the financial year 73 members' and 39 associates' subscriptions had been received. The balance against the association had been reduced by nearly 4*l.*, but it still amounted to more than 17*l.* It was expected that outstanding subscriptions would cover this amount.

For the coming year classes had already been commenced, but with smaller numbers than before. It is proposed to alter the arrangement of the library. A gentleman had consented to fill the post of honorary librarian, and it was intended to issue books to members on Thursday evenings from 7 to 8.30 P.M., under certain conditions as to returning and renewal. It was hoped that this would tend to make the library more useful, and perhaps to augment the library fund. This fund showed a balance in the bank of 10*l.* 16*s.* 1*d.* The chairman, Mr. W. Scott Brown, in moving the adoption of the report, expressed the disappointment felt on finding that after ten years' work so few new members had been found willing to undertake the official work of the association. It was gratifying to see the faces of the founders still round the council board, but they ought by this time to have been relieved of their work. One thing which should be a great attraction to induce young men to join the society were the excellent lectures of Mr. Siebold, and it would be anything but gratifying if the association which organised and maintained those lectures should itself fail for want of support. Mr. Robinson remarked that those who did not see the good of subscribing forgot that they shared in the general advance caused by education. Mr. Benger placed the cause of the want of interest in the association in a wrong conception of its office. He thought that many regarded their subscription as a commercial investment bound to bring interest. But the sum was so small that they did not trouble themselves to find out the form that interest took. Mr. Southall's address to the students at the School of Pharmacy, Bloomsbury Square, should teach all such that life was meant to consist of something besides pounds, shillings, and pence.

The following gentlemen were re-elected officers for the year 1877-78:—President, Mr. W. Scott Brown; Vice-Presidents, Mr. J. T. Slugg, F.R.A.S., and Mr. W. Wilkinson; Treasurer, Mr. Geo. S. Woolley; Hon. Secs., Mr. F. Baden Benger, F.C.S., and Mr. Herman Woolley; other members of the council, Messrs. Barnaby, Blain, Botham, Fisher, Hargraves, Hughes, Kay, Mumbray, Payne, Robinson, Slack. Mr. T. Swindells was appointed honorary librarian.

LEEDS CHEMISTS' ASSOCIATION.

On October 17 the winter session of this association commenced with a tea at the Assembly Rooms, Queen's Hotel. The prizes gained by the students of the previous session were distributed during the evening. A new member and a new associate were elected.

The president, Mr. Peter Jefferson, referred with regret to the growing practice of purchasing pharmaceutical powders and preparations. When he was first connected with the trade, more than forty years ago, it was the rule and not the exception for the pharmacist to make the preparations in his own establishment. The reason for the change was undoubtedly the greater economy and efficacy which were the result of manufacturing on a large scale.

He did not think that the custom prevailing in many places of adding to the legitimate trade of the chemist and druggist that of oils and colours, brushes, illuminating oils, or perfumery, should be considered derogatory to the profession.

In former days the sale of patent medicines was very largely in the hands of booksellers. This branch only belonged to the chemist and druggist in appearance, and was certainly the reverse of elevating. It seems that the trade is now partly returning to the hands of shopkeepers other than chemists, and to this no plausible objection can be raised. The Government stamp removes all responsibility from the seller.

Referring to the recent attempts at legislation to put a stop to counter practice, he thought that such a course would prove more injurious to the public than to the chemist. It would have a distinct tendency to pauperise the lower classes by compelling them to resort to dispensaries and similar institutions for medical advice. He, however, deprecated any attempts to court such a trade by advertisement or otherwise.

He thought it should be remembered that legislation was for the protection of the public, and not of a class. Any attempt to restrain grocers and others from selling harmless drugs would be adverse to the spirit of the law. It was possible to increase the number of articles scheduled as poisons, but we could not prevent the indiscriminate sale of any that were not. The president concluded with an exhortation to all to keep themselves well to the front in the continuing march of improvement of pharmacy.

Mr. Councillor Stead, in moving a vote of thanks to the president, said that when he first tied on the white apron, forty years before, there were few classes and fewer opportunities for attending them. Increased opportunities brought increased responsibilities, and it was well always to remember this. The main difficulty with regard to the Sale of Food and Drugs Act was in educating the public to appreciate its benefits. As regards counter practice, he thought that in poor districts the chemist should be allowed to prescribe for children and the poor.

Mr. Abbott, in seconding the proposition, insisted on the value of a practical and personal acquaintance with facts wherever this was possible.

Mr. Barclay, of Birmingham, expressed his pleasure in being present, and described some of the work done by the Trade Association.

The vote being put by Mr. Yewdall, was carried unanimously.

PHARMACEUTICAL SOCIETY OF IRELAND.

The monthly meeting of the council of the above society was held at the College of Physicians, Kildare Street, on Wednesday, November 8, Sir D. J. Corrigan, president, in the chair. The following were present:—Dr. A. Smith, vice-president, Mr. William Allen, Mr. J. G. Boileau, Dr. Collins, Dr. Frazer, Mr. J. Goodwin, Mr. W. Hayes, Mr. E. M. Hodgson, Mr. J. T. Holmes, Mr. S. Oldham, Sir G. B. Owens, Mr. Payne, Belfast, Mr. Pring, Belfast, Dr. Ryan, Professor Tichborne, Dr. Whitla, Monaghan, and Dr. Whittaker, Belfast.

A letter was read from Mr. Henry Robinson, stating that some alteration in the bye-laws had been approved by the Privy Council.

Letters were read from several correspondents, who had been unsuccessful at the examinations, asking for another opportunity of presenting themselves under the modified code, one gentleman stating that in his case he believed the cause of his being unsuccessful was that he was not sufficiently acquainted with the subjects. It was proposed by Mr. Oldham, seconded by Mr. Holmes, that another opportunity be afforded.

Dr. Collins requested the president to rule that the motion could not be received, as it was illegal. Considerable discussion took place, all members taking part. Eventually, Mr. Oldham said that he saw plainly, from the opinions expressed, that he was not likely to carry his point, and he would relieve the president by withdrawing his resolution.

The other business was merely of a formal character. The following were admitted to membership:—

James Noy Vance, Bray
Edward J. Boileau, Dublin
John Mason, Kimmago
Henry Lyons, Omagh
Robert J. Galwey, Dublin
John Walter Norris, Waterford
Henry Staunton, Portarlington.
Wm. Robert Hamilton, Newry.

SUMMARY OF THE INCOME AND EXPENDITURE OF THE PHARMACEUTICAL SOCIETY OF IRELAND,

For the Year ended September 30, 1877.

CHARGE.

	£	s.	d.
To Balance, as per Treasurer's account, September 30, 1876..	243	7	6
,, Lodgments in September, 1876, for Examinations in October, not included by Treasurer in his Balance	73	10	0
Balance, as per present Statement	316	17	6
FEES.			
To 66 Fees for Examination for the Licence of Pharmaceutical Chemist, at 5*l.* 5*s.*	346	10	0
,, 1 do., do. (Mr. W. H. Allen)	5	5	0
,, 2 Registrations of Licentiate Apothecaries as Pharmaceutical Chemists	6	6	0
,, 49 Fees for the Preliminary Examination, at 2*l.* 2*s.*	102	18	0
SUBSCRIPTIONS.			
To Subscriptions from 43 Elected Members of the Society, for the Year ending September 30, 1877, at 1*l.* 1*s.* each	45	3	0
REGISTERS.			
To Cash received for 21 Registers sold, to September 12, 1877..	1	1	0
Total	824	0	6

DISCHARGE.

	£	s.	d.
By 23 Fees returned to Candidates for the Licence, at 3*l.* 3*s.*	72	9	0
,, 1 do., do., in full to Mr. W. H. Allen	5	5	0
,, 12 do., do., to Candidates for the Preliminary Examination, at 1*l.* 11*s.* 6*d.*	18	18	0
,, Fees paid Dr. Collins for 55 Preliminary Examinations, at 10*s.* 6*d.* each	28	17	6
,, Do., do., 44 Pharmaceutical Examinations at 10*s.* 6*d.* each..	23	2	0
,, Do., Dr. W. Smith, do., do.	23	2	0
,, Do., Dr. Montgomery, do. do.	23	2	0
,, Do., Mr. H. N. Draper, do., do.	23	2	0
,, Hugh J. Fennell, 51 weeks' Salary to August 31, 1877..	51	0	0
,, R. M'Neice, one year's Wages as Attendant, to August 1, 1877	9	0	0
,, Rent, for one year, to May 1, 1877, paid to K. & Q.'s College of Physicians	40	0	0
SUNDRIES.			
By E. W. Hughes, Chemical Table, and Compounding Case for Examinations	26	10	0
,, Grants to two Examiners to furnish the above Cases	12	0	0
,, Messrs. Ponsonby & Murphy, Printing, from July 28, 1876, to March 3, 1877 (including 250 copies of the Calendar for 1877)	25	19	8
,, Wm. W. Cleland, Printing 500 Pharmaceutical Charts	4	13	0
,, Browne & Nolan, for M.S. Registers and Stationery	3	18	9
,, Hugh M'Dowell, Large Table for Council Room ..	9	10	0
,, Do., Wash-hand Stand and Pedestal, furnished ..	6	11	6
,, Lawlor, Hill & Co., Four-fold Screen	3	0	0
,, Apothecaries' Hall, Drugs for Examiner in Pharmacy	2	17	7
,, Postage and Sundries for one year, per pass book ..	6	14	9
,, Gunn & Cameron, Advertising Examinations in *General Advertiser*	3	17	0
,, J. A. Henderson, do., in *Belfast News-Letter* ..	0	10	8
,, Geo. A. Hanlon, Woodcut of the Society's Seal ..	0	15	0
,, Bank of Ireland, Stamps on 21 Cheques	0	1	9
	424	17	2
By Balance in Bank, September 26	399	3	4
Total..	824	0	6

Net Balance, September 30, 1877 (deducting liabilities):—	£	s.	d.	£	s.	d.
Balance as per Bank Book				399	3	4
Fees returnable to Candidates	34	13	0			
Examiners' Fees	66	13	6			
				101	6	6
				297	16	10

We have examined the above Account, and find it correct.

WILLIAM HAYES,
STANLEY OLDHAM, for WILLIAM ALLEN, } *Auditors.*

October 1, 1877.

A meeting of the Executive Committee of the Pharmaceutical Conference was held on the same day, Professor Tichborne presiding. It was decided that the committee here should be named the "Irish Committee," instead of "Local," so as to make the reception of the British Pharmaceutical Conference a national affair.

ANTISEPTICS AND DISINFECTANTS.*

By ALFRED HENRY MASON, F.C.S.

ANTISEPTICS are substances which have the property of preventing or arresting putrefaction in dead animal or vegetable matter. The access of air, together with a moderate amount of warmth and of moisture, are necessary to the occurrence of the putrefactive changes, which consist essentially in the breaking up of the complex organic material and the formation of new and simpler combinations from its constituent elements. During the process various gases and vapours are evolved, and the lower forms of animal and vegetable life are observed to grow and multiply in the putrefying substance. The exciting causes of putrefaction have long formed a subject of scientific discussion, two widely different theories being maintained respecting them. By the one, the changes which occur during the process are held to be from the first the result of chemical decomposition in the organic substance, whose atoms are in a state of motion or activity, which is capable of being communicated by catalytic action to organic material in contact with it (Liebig), while, further, it is asserted that minute living organisms may be evolved from the dead material as the result of their chemical transformations. By the other theory, which is founded mainly upon the researches of Pasteur, the putrefactive changes are ascribed to the agency of organised germs ever present in the atmosphere, which, finding a suitable nidus in the putrescible material, grow and multiply, producing the chemical decomposition as the result of their action.

By those who hold the purely chemical theory of putrefaction, antiseptics are believed to operate in different ways, according to their chemical properties. Thus sulphurous acid is said to act by de-oxidising the putrescible matter; the mineral acids and metallic salts by combining with the substance and forming a permanent compound; and the tar acids in a similar manner. On the other hand, the supporters of the germ theory maintain that carbolic acid, and indeed all true antiseptics, produce their effect by acting as poisons to the infusorial organisms which are held to be essential to the occurrence of the putrefactive process.

Disinfectants are those substances which dispel and neutralise contagious miasmata, removing and destroying that which is obnoxious to animal life. Miasms are poisonous gases, rich in hydrogen; the lowest types and best known representatives are sulphuretted hydrogen and ammonia. Contagions are microscopic germ cells, which are represented by yeast cells, or spores of fungi. Both these evils have a certain relation to each other. Contagions never flourish more abundantly than when miasms are developed in large masses, while the dissolution of the contagions developes miasms.

Natural Disinfectants.—Pure air and pure water are natural disinfectants: the former shows itself in the effects of good ventilation, the latter in the disintegration of organic substances as they flow along our polluted rivers. Soil is also a natural disinfectant, and, in conjunction with air and water, is most efficient. The water carries into the soil the impurities it meets with, the air penetrates with the water and is retained by the soil; by this means the organic and putrid substances are brought into contact with the oxygen and oxidation forcibly takes place.

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* Read at the evening meeting of the Liverpool Chemists' Association, held on Thursday evening, November 8, 1877.

Cold, of all antiseptics and disinfectants, is the most powerful, since growth and decomposition cannot go on when the temperature sinks below 35° Fahr. *Heat* is also a disinfectant, which should always be taken advantage of where possible. The temperature at which infectious matter is rendered inert has been, and continues to be, a subject of keen controversy, chiefly in relation to the point at which the vitality of living germs and minute infusorial creatures is destroyed.

Mineral acids, organic acids, haloids, alkalies, mineral salts, permanganates, camphor, turpentine, &c., constitute artificial antiseptics or (and) disinfectants.

I propose selecting from these substances a few of the more popular, which are in everyday use, as well as those of more recent introduction, to explain their composition and action.

Of the haloids, *Chlorine* requires to be tempered by the quiescent affinity of some alkaline base. Lime is the substance in most general use—chlorinated lime (called, commercially, bleaching powder) generally contains 35 per cent. of chlorine. It undoubtedly possesses the property both of preventing and arresting putrefaction, although in many instances it seems rather to destroy the odour of putrefaction than to stop its progress.

No substance in nature, with the exception of the allied compounds of soda and potash, approaches it in the property of annihilating fœtid effluvia, more especially those which arise from the decay of animal matter. This property depends in its power of decomposing sulphuretted hydrogen, hydrosulphate of ammonia, and ammonia itself, which are the chief fœtid gases evolved during animal putrefaction. This substance acts as an aërial disinfectant.

Chloride of Soda (Labarraque's liquid) is a compound homologous with chloride of lime.

Chloride of Zinc (Burnett's fluid) is a liquid containing from 30 to 50 per cent. of chloride. Its action is due to its power of coagulating albumen, and of absorbing ammonia and sulphuretted hydrogen. Its chief use is as a disinfectant of fecal matter; it has no power as an aërial disinfectant, and is too corrosive for textile fabrics.

Chloride of Aluminium, or the solution called chloralum, contains about 15 per cent. of the salt. It is stated by experimenters, such as Dr. Dougall and others, to be powerfully antiseptic, but as it does not contain anything which is capable of absorbing putrid miasms it has no deodorising power, and it is, therefore, worthless in the sick room. Chloride of aluminium, however, is a good precipitating agent for sewage, and when combined with the action of lime it thoroughly defecates such matters.

Mineral Sulphates, when in solution, are good disinfectants of drains and of fecal matters directly they are discharged from the body, but these are perhaps not well adapted for domestic use.

Amongst the organic acids *Carbolic Acid* occupies probably the most important position, not relatively, but from the fact that it has become a popular agent and that its antiseptic power has been proved beyond doubt to be very great. As you are aware, the late Dr. Calvert laboured for many years with his able assistants, and has published many series of experiments to show the superiority of this substance over all others. He has shown that the presence of one part of the acid in 1,000 of an organic solution will check decomposition and prevent the appearance of vibrio or fungus life for more than forty days. In a lecture he delivered before the Society for the Encouragement of Natural Industry in France, he says:—"Carbolic acid is an antiseptic and disinfectant much more active and much more rational than those generally in use; other disinfectants, such as chlorine and permanganate of potash, operate by oxidising, not only gaseous products given off by putrefaction, but all organic matters with which they come in contact; whilst carbolic acid, on the contrary, merely destroys the causes of putrefaction, without acting on the organic substance." The great difference which, therefore, distinguishes them is that the former deals with the effects, the latter with the causes. Moreover, carbolic acid is volatile; it meets with and detroys the germs or sporules which float in the atmosphere, and vitiate it. This cannot be said of several other disinfectants which act only by contact, and are mere deodorisers. "Prevention is better than cure." Hence a substance which prevents the decomposition of organic matter is perhaps of more value than one which checks the consequence only. M. Devergne states that water containing $\frac{1}{1000}$th part of commercial liquid carbolic acid proved sufficient during the intense heat of summer to disinfect the putrefying corpses in the Morgue without the aid of any shaft, when six or seven bodies were lying there.

It is felt by many chemists that the experiments of Calvert lose their scientific worth from the fact that he so freely disparaged competitive substances of ascertained value. He certainly did not apply other disinfectants in quantities representing the same theoretical or commercial value, but, be this as it may, no one can deny that the tar acids are true antiseptics and disinfectants, and that they stand at or near the head of the list of substances for which these properties are claimed.

You are aware that carbolic acid is presented to us in a variety of forms, crystalline or glacial, as that of the Pharmacopœia, commercial liquid (commonly known as No. 5) and carbolic powder (sometimes called carbolate of lime). The glacial acid is sometimes contaminated with cresylic acid and other homologues, so that we have also an acid which is purer, with a higher melting point than 35° C., and, further, we have absolute phenol, which assumes a granular form. I would call attention to the necessity for the commercial liquid acid to be free from sulphuretted hydrogen, with which it is frequently contaminated, and that it should contain 85 per cent. of carbolic and cresylic acids. The antiseptic properties of cresylic acid are probably equal to those of carbolic or phenic acid, but as it cannot be purified by crystallisation, the samples almost invariably contain traces of tarry matter, so that its solution in water has a rank tarry smell. If you will prepare a 5 per cent. solution in water, with cresylic acid (Calvert's No. 4), with Calvert's No. 2 and No. 1 acids, and then with absolute phenol, you will perceive the marked difference in smell. Carbolic powder should contain at least 15 per cent. of acid, as shown by the decomposition of the lime by hydrochloric acid.

To the domestic application of most of the forenamed substances as disinfectants objections have been raised. Chlorine and its combinations are dangerous for those having weak respiratory organs, while carbolic acid is stated to be only effective when used concentrated, and then the smell is unendurable to the invalid—further, they are poisonous to mankind when taken internally. Some of these objections are valid, but it becomes a question whether it is not much better to endure some inconveniences rather than run the risk of greater evils, especially when cases of poisoning can always be traced to carelessness.

Sulphurous acid is a substance of great antiseptic power. Most conclusive observations of this may be found in No. 6 of a series of reports of the medical officer of the Privy Council, where Dr. Baxter shows that sulphur dioxide has a marked superiority over chlorine and carbolic acid in its power of rendering vaccine virus absolutely inert, and this under conditions which seem above all others to render the virulent particles less susceptible to destructive influences. Dr. Sansom confirms these experiments, and further shows that sulphurous acid possesses properties both as a disinfectant of virulent liquids and as an aërial disinfectant far above its most powerful rivals.

Since Schönbein, in 1840, announced his results, many other distinguished chemists have stated that ozone, ozonic oxygen and nascent oxygen constitute one and the same substance, which possesses very energetic chemical properties; that ozone exists naturally in the atmosphere, where it maintains in a state of purity the air we breathe and the surface of the earth; that emanations of organic origin destroy it, and that consequently it is with difficulty detected in the air of large towns, whereas in the atmosphere of rural districts it is easily detected.

Manganese, as you are aware, is a metal, having an extraordinary affinity for oxygen, which, under certain favourable circumstances, it attracts and retains in large quantities. With a limited quantity of this element it forms oxides, in which the oxygen present is in comparatively stable union, but *not* soluble in water. When a further quantity of oxygen is presented, in a manner favourable for union, other compounds are formed which *are* soluble: in these the superadded oxygen is held in a state of loose combination, ready to be detached by contact with oxidisable substances such as putrescible matter. These compounds Schönbein called ozonides, on account of the oxygen so combined being in all respects analogous to ozone. We understand that by these substances manganic and permanganic acid are meant. These, being very unstable, require to be combined with salts, forming manganates and permanganates. The oxidising action of these compounds is such that when brought in contact, even in the form of very dilute solution, with organic matter, they are rapidly decomposed by it and yield up a large portion of the oxygen they contain, which, being in the nascent state, forms, by a process of combustion, products that are inert and consequently innocuous.

Condy's fluids are solutions of these salts, and an analysis of them will be found in a paper read before the Pharmaceutical Conference at Edinburgh, 1871, by Mr. A. H. Allen, F.C.S.

The permanganates are oxidising agents, but taken in comparison with the substances already referred to, they do not appear to exert much action on vital manifestations, though they are very active in the destruction of dead organic matter. As there is no reliable evidence of their power of destroying contagion, the use of these compounds in a sick room as disinfectants is questionable, but by liberating oxygen they certainly purify the air, and their property of attacking and oxidising dead and decayed organic matter gives them value as a means of purifying potable water.

Schönbein stated "that oil of turpentine can generate peroxide of hydrogen." In vol. iii. of Miller's "Chemistry" it is stated, "Oil of turpentine gradually absorbs oxygen from the air, with formation of a certain proportion of ozone;" and in "Gmelin," vol. xiv., it is stated, "Oil of turpentine absorbs oxygen gas, acquiring new properties, and being converted into ozonised oil of turpentine."

Lawes, Gilbert, and Pugh have stated their belief that the supposed ozone existing in the vicinity of vegetation is due to the oxidation of hydrocarbons evolved by plants. Those statements, variously modified, have been so often repeated that they were almost universally received as matters of fact, and an immense amount of work has been done on this subject.

Dr. Bond, after a series of experiments, has discovered a method by which ordinary turpentine by contact with sulphuric acid becomes changed or polymerised, and he has produced a substance which he has named "terebene." He states: "When exposed to the air terebene volatilises, emitting an odour of a fragrant and agreeable character, which when diffused through the atmosphere somewhat recalls that of pine wood. When this is exposed it acts upon the oxygen of the air, developing ozone in the latter, at the same time becoming itself charged with peroxide of hydrogen (antozone of Schönbein)." "It possesses properties which give it a high claim as an effective and agreeable deodorant, not merely for sanitary, but also for medical and surgical purposes. It has also a distinct antiseptic power, and when added to putrescent matter arrests putrefaction for a considerable time."

Messrs. Braidwood and Vacher, in their recent researches on "Contagium," state that it possesses germicide powers, so far as can be judged from the effects which it exhibits in destroying the vitality of vaccine matter when applied to the heifer. Mr. Waddy, of Gloucester, and Mr. Biggs, of Bath, also give evidence as to its antiseptic properties in the prevention of contagion and the treatment of foul ulcers and gangrenous sores.

That terebene is a deodoriser I can testify, but excepting the more agreeable odour which its use evolves, it is not better than ordinary turpentine, because it does not readily oxidise, and we must not forget that the property of disinfectants is due to those very products which are formed from the oxidation. Terebene is an aërial disinfectant, but its vapours are inflammable, which may easily be ascertained by heating a little in a test tube, or lighting a piece of paper which has been immersed in it. Its inhalation would, I should think, be attended with some danger. It is of a greasy nature, and not miscible with water. Terebene combined with soap and other toilet requisites is agreeable in its application, and such requisites are very popular.

Although Schönbein's statements and peculiar views have received much support, there has ever existed more or less doubt about the formation of ozone by the oxidation of such bodies as turpentine. In the view of acquiring some certain knowledge on this point, Mr. Kingzett made a series of experiments (which have been published from time to time in the scientific journals), with the following results:—At the commencement of the investigation it was taken for granted that the terpenes produce on exposure to the air an agent resembling ozone on the one hand and peroxide of hydrogen on the other hand, but the exact nature was unknown. In his first paper Mr. Kingzett showed that it was not ozone, and that peroxide of hydrogen was not formed directly, but that in the case of turpentine an organic peroxide was first produced, which was afterwards decomposed by water and yielded peroxide of hydrogen. In his second paper he established the exact conditions under which it was formed. He further isolated and analysed the decomposition products given by water, and prepared considerable quantities—amongst them were camphoric acid and peroxide of hydrogen. In his third paper he showed that a number of terpenes produced similar results when similarly treated, and explained why the crude oils containing them gave these reactions. Further, he determined the nature of the exact radical in these various terpenes and oils, the presence of which is essential to the formation of peroxide of hydrogen; this radical is cymene ($C_{10}H_{14}$). Having done this, large quantities of peroxide of hydrogen in aqueous solution and accompanied by camphoric acid and other bodies were prepared, by blowing air through a mechanical mixture of turpentine and water at 40° C., determining at all stages of the oxidation the varying conditions and results, and proving that the said aqueous solution possessed unqualified powers for disinfecting and antiseptic purposes. This liquid has been patented under the name of "Sanitas."

"Sanitas," therefore, is an aqueous solution of the oxidation products of turpentine, comprising peroxide of hydrogen, camphoric acid, camphoric peroxide, camphor, &c. If you have read a very able pamphlet issued as an advertisement for this substance, you will have noticed the results of experiments with it. Peroxide of hydrogen only and camphoric acid only do not produce such satisfactory results as when the two are combined. Camphoric acid is stated to have all the properties of salicylic acid, to which it is chemically allied. We have in "Sanitas" the first instance on record in which a natural process of atmospheric purification has been imitated to perfection; in fact, on a commercial scale we could now repeat that which in pine and eucalyptus forests constitutes one of the most efficacious processes of nature's hygiene.

Dr. Day, of Geelong, has for several years been applying peroxide of hydrogen most successfully, and it is well known that it is a powerful disinfectant, from the fact that it readily parts with nascent oxygen, which destroys effete matters. Dr. Day disputes, therefore, Mr. Kingzett's claim to priority of discovery, but Dr. Day's investigations were the result of observation, whereas Mr. Kingzett's claim to the discovery is the result of original investigation as a chemist, and not as a mere observer, and he has explained his results by mathematical and scientific methods. He has further proved that ozone is not formed in the oxidation of turpentine, ether, or phosphorus, but in all cases peroxide of hydrogen.

There is plenty of medical and chemical evidence in favour of "Sanitas" (as with all other specialities), fully maintaining the position ascribed to it as a domestic appliance. I can testify to its efficacy, and as its application is agreeable, and the substance is non-poisonous, it possesses advantages over others. The use of "Toilet Sanitas" certainly has the effect of rendering the palate more sensitive to the presence of disagreeable odours.

At the present time a paper on antiseptics would be far from complete without allusion to the important results of their application in the surgical treatment of diseases. Adopting the germ theory of putrefaction, and regarding many of the evils arising in connection with open wounds as the result of putrid discharges produced by the agency of atmospheric germs, Professor Lister seeks to exclude the access of these to wounded surfaces by the employment of antiseptics. His published investigations have established a new era in the treatment of such cases. Many antiseptics have been used, but absolute phenol (which is pure carbolic acid, and on account of its purity is more soluble and less irritating than carbolic acid), is the substance most generally employed.

The internal administration of antiseptics to arrest ferments and prevent germ growths, and to destroy the effects of fetid accumulations, has also received much attention. Salicylic acid will probably be valuable for this purpose.

The application of antiseptics in the arts as preventive agents for arresting and avoiding fermentation should also be referred to. Probably sulphurous acid and its salts, the bisulphites, hold the most important place amongst these, but the odour is disagreeable, and several recent introductions have now been found effectual.

In conclusion, gentlemen, the subject I have undertaken is one of great magnitude: the ground has been gone over by many able men, and the difficulties of discrimination are great, the advocate of each speciality showing very powerfully that his speciality is the "only true and effectual antiseptic and disinfectant."

I fear I have done little justice to the subject, but if I have been able to make the results of my studies as interesting to you as they have been instructive to myself let us hope the information we have gained will lead us to further work. The subject derives much interest from its relation to the doctrines of the origin of life, as well as to questions concerning the sources of contagion and epidemic disease, which continues to the present time a matter of keen inquiry and experiment amongst physiologists.

Whilst we look to and value artificial means, let us never forget, especially in our large towns, that nature's antiseptics and disinfectants are cleanliness, pure air, good ventilation, and pure water.

AN AMERICAN ON THE LONDON DRUG SALES.

MR. GEORGE J. SEABURY, of New York, who, as many of our readers know, has established himself in London, is threatening a series of articles on our pharmaceutical peculiarities in the *American Druggists' Circular*. As Mr. Seabury is a particularly competent and very friendly observer, we do not think his remarks will be unwelcome to most of our readers. His first paper is on the London drug auctions, a subject treated in this journal some years ago, but without the advantage of being regarded from an outside point of view. First of all, our critic enlarges on the vast commerce of this country, which, according to him, is traceable not at all to Free Trade, as the ignorant natives have sometimes imagined, but mainly to the power of money! Mr. Seabury omits to tell us how this nation got its money, which is the main point after all. A supplementary aid he sees, and this is a very sensible remark, in the arrangement of our foreign consular service, and the choice of men with commercial rather than with literary tastes as our foreign representatives, the United States having notably made the latter choice.

The London drug sales room, says our "Intelligent Foreigner," one would naturally imagine, was a beautiful, spacious, aristocratic hall, inlaid with gold and ebony, maintained by stately Grecian columns, chandeliers suspended over mosaic marbled floors, frescoed ceiling; while the walls allegorically represented caravans crossing Sahara, Africans navigating the Nile, Persians preparing asafœtida, Turks collecting the somniferous opium, "Hottentots gathering buchu," Chinese poetically masculating ginseng, or Dr. Crum expiating upon the extraordinary properties of his lightning fluid; but let us solemnly pause and state it is not arranged in such oriental splendour, and that it is a small, unassuming room, in appearance genteel and stiff, and centrally located in London proper, adjoining the Corn Exchange, in Mark Lane. In the centre, opposite the doorway, stands a raised desk; clustered affectionately about it are numerous narrow desk-like tables, and hair-cloth settees sufficient to accommodate from seventy-five to one hundred persons. All the furniture is made of mahogany—in fact, the national fancy wood is mahogany. Legitimate drugs of every description, except gums, are offered and sold here every second Thursday, or twice a month, while the remaining two Thursdays are devoted to the gum sales.

The selling is conducted by drug brokers, who are called drug auctioneers. In this specialty there are engaged some dozen or more firms. Each concern has its customers, which usually consist of bankers and traders, who have either received consignments or bartered for manufactures. A few days prior to the regular sale day memoranda of goods to be offered are sent to the auctioneer. This individual, or his representative, examines goods and apportions them in lots to suit the requirements of the purchaser, small and large. When all the applications have been made by parties desirous of selling, each auctioneer issues a comprehensive catalogue, which gives the number of packages to be sold, marks and numbers on cases, style of goods, date of arrival, name of vessel, and where goods may be inspected. Occasionally buyers are compelled to visit from 30 to 40 storehouses in order to examine the articles mentioned on the list. There are special warehouses for opium, rhubarb, gums, &c. Samples are also exhibited at the auctioneer's office or sale-room. When buyers assemble at the sale-room it is fair to presume that they have inspected the goods and bid intelligently.

Goods offered are not sold necessarily, but go to the highest bidder when there is no limitation as to price. Terms are usually cash in 14 days, 2½ per cent. off; still, commission men make more liberal terms to approved accounts; in fact, some of the middle or commission men *own*, in a commercial sense, many of our heaviest importers, to whom they extend unlimited credit, while they themselves pay cash. This may be considered mutual policy, as money can be easily borrowed at 4 per cent. per annum.

Promptly at 11 o'clock the auctioneer mounts his stool, ready to make capital out of every wink or nod. Around his throne are seated, conversing in low tones, eager buyers, catalogue in hand, and in nearly every instance armed with that ancient relic—a goose-quill. A hacking cough commands silence. "Lot number 70—a fine parcel of Rio ipecac. What will you give? Shall I have 5*s*., 4*s*. 6*d*., 4*s*.?" An offer is made. From this point the auctioneer is all eyes and ears until the highest price is reached. Often, without further ceremony, he informs his audience that the figure offered is entirely too low—withdraws the goods, even after several different bids have been made. The assembled martyrs good-naturedly acquiesce amid the scratching of goose-feathers and the excitement consequent upon the offering of a new line of drugs.

The heaviest buyers are such well-established houses as W. H. Cole & Co., David Taylor & Sons, who are the accredited representatives of our largest importers. These firms are known as middle or commission men; they execute orders for their correspondents with great impartiality and shrewdness for the mere broker's commission of 2½ per cent., which is the recognised rate—they undoubtedly buy staples on lower rates. Contingent expenditures, such as shipping and handling, will amount to about 5 per cent. on ordinary articles, while on valuable goods this figure is greatly reduced. Steamers' rates will average about 25*s*. (about $6·00) per ton of 2,240 lbs.; sailing vessels, from 5*s*. to 8*s*., or $1·50 to $2·00 per ton.

London has also an open market, which is patronised only when the demand is imperative or when broken packages are ordered. Regular orders from any source can be filled at the drug sale-room, where dealers can avail themselves at ruling prices. "Cornering" goods is discountenanced as sharp practice. Auctioneers are disposed to distribute their goods; favouritism is seldom indulged in; any other plan than equity is deemed incompatible with the traditions of this model sale-room.

Importers often arm their commission men with conditional orders, who always buy at such limits whenever an opportunity presents itself. Drug brokers in England do not speculate in their line of goods, as it is considered inadmissible and prejudicial to the interests of their employers.

THE MINERAL WATER TRADE.

ANNUAL MEETING.

THE National Association of Mineral Water Manufacturers met in London on October 23 last. This, it appeared, was their sixth annual assembly, but such a large attendance as was gained this year had never before been reached. A room had been engaged for the meeting at the Guildhall Tavern, but it scarcely held half the visitors who desired to enter.

The President of the Association, Mr. J. J. Hunt, of Norwich, briefly introduced the business, and called on Mr. E. M. Adams, the secretary, to read the report. This was rather a long affair, but its substance can be told very briefly. The association had devoted a good deal of attention to the question of trade marks on bottles. This was a most important subject to mineral water manufacturers, and the committee considered it as good as settled. First, by the case of Rose *v*. Henley, heard before Vice-Chancellor Malins, in May last, when His Lordship remarked:—"I take it to be perfectly clear that a trader has such an exclusive right in these things (bottles) that when they are sold by him another trador is not at liberty to fill them with his own articles, because his doing so is calculated to deceive the public." He also told the defendant that "He must have known it was not right for him to put his liquor into the plaintiff's bottles, even if they were returned to him with his own." The secretary had also obtained from the Registrar of Trade Marks the following opinion:—"That the person registering a mark for mineral waters will be entitled to prevent anyone else from applying that mark to mineral waters, whether the mark be stamped on the bottle containing the water, or printed on a label pasted on the bottle, or placed upon cases containing bottles of the water, or in any other way placed upon goods for which the mark is registered." Mr. Provost, of Huntingdon, too, had commenced a suit for infringement of his rights against another maker who had used his bottles, and this had been settled in his favour, though a legal decision had not been obtained. The case of Mr. Yeomans, of Cambridge, who had been fined for selling soda water containing lead, was also alluded to, and manufacturers were strongly recommended to have their products analysed from time to time, "keeping their houses in such good order as not to fear the inspection of the public analyst."

Among the speeches on the report was a very spirited one from Mr. Mumby, of Gosport, who thought it was to be regretted that the association had not taken up the case commenced by Mr. Provost, and carried it through until a definitive decision had been secured. He did not consider that the case of Rose's lime juice bottles was quite analogous.

Mr. Provost, in reply, said his opponent, a maker at Market Harborough, had yielded all that he had asked, therefore there was no object in continuing the litigation.

Mr. Adams (the secretary) considered that the decisions were clearly in their favour.

For the ensuing year Mr. Mumby (Gosport) was elected president, Mr. G. Read (Leicester) vice-president, Mr. Adams secretary, and Mr. Provost (Huntingdon) treasurer.

The formation of a committee with the object of establishing a Protection Fund was next discussed. Mr. Adams said about 1,600 circulars on this subject had been already sent out, and not more than 11 replies had been received. The money received was barely sufficient to pay expenses of circulars and postage. The desirability of having a Protection Fund was, however, strongly urged, and the committee was duly appointed.

The chairman next suggested the notion of appointing an analyst to the association.

Mr. Chas. Heisch, analytical chemist, spoke on this subject and Mr. Yeomans described his case. He had expected that the complaint against him would have been that his product did not contain soda, and he was quite taken by surprise when the certificate alleging the presence of lead and copper was presented.

Mr. Foster (Barnett, Son & Foster) said these prosecutions might be avoided by using the proper appliances, and why not, therefore, use them? He said it was the foreign water importers who were promulgating the theory that home made artificial waters were injurious. He strongly recommended the appointment of an analyst.

The funds in hand did not justify that step at present, however, and its consideration was left to the committee.

Annual Dinner.

The same evening a dinner was held at the Guildhall Tavern, 159 ladies and gentlemen forming the company, being exactly double, save one, the number provided for.

The two great patent stoppered bottle firms (Messrs. Barrett & Elers and Codd & Co.) had parties of their own, consisting, we presume, of their licensees, and besides mineral water makers from all parts of the country, nearly all the chief wholesale caterers to their wants were represented. After the loyal toasts had been disposed of, Mr. Shield, the editor of the *Licensed Victuallers' Guardian*, proposed the Army, Navy and Reserve Forces in a fervid oration. Captain Foster (Barnett, Son & Foster) and Lieut. Simpson (J. Lumb & Co.) responded. Then the chairman proposed the toast of the evening, "Success to the National Mineral Water Association," which brought up Mr. Adams, the popular and energetic secretary. The succeeding toasts, which were, "The Honorary Members," "Exhibitors and Visitors," "The Press," &c., offered excellent opportunities for judicious advertising, which were carefully taken advantage of by representatives of Messrs. W. J. Bush & Co. (chemicals), Dows, Clark & Co., Barnett, Son & Foster, Davenport, &c. (machinery), Alexander & Austin (bottles), *The Licensed Victuallers' Guardian*, The Chemist and Druggist, *The Mineral Waters Trade Review* and *The Mineral Waters Trade Recorder*. When, after all this, another gentleman, addressing the chairman, said, "Sir, I rise on behalf of Corks," the satire was felt to be not undeserved.

Two American gentlemen, introduced by Mr. Clark, gave some musical performances in the course of the evening, and the proceedings were cheerful and well conducted throughout.

The Exhibition.

Along with meetings of the trade an exhibition of machinery, &c., had been organised and was held on a large basement floor, which happened to be vacant just opposite the head-quarters, the Guildhall Tavern. This show was a capital representation of the specialities of the different makers, which were examined with keen interest; and as in most cases the heads of firms were personally present to explain their exhibits, the result was, as far as we could ascertain, a considerable proportion of actual and prospective business.

Passing round the room, the first stand on entering was the show of Messrs. Hayward Tyler & Co. Their chief exhibit was a handsome machine with Brahma pump. This machine was noticeable for its light appearance, combined with great strength. The cylinder connected with this machine was of copper lined with pure English tin. This firm also showed Barrett & Elers' patent syruping pump, some bottling racks, and an apparatus for bottling fermented liquors guaranteed to provide exactness of measure.

The well-known Codd's bottles were in strong force at the next stand, and in connection with them was a large display of Messrs. Barnett, Son & Foster's machinery. The crowd which continually surrounded Mr. Foster as he indefatigably repeated his demonstrations seemed to yield a fair percentage of purchasers. The excellent machine with double pump action and all improvements, manufactured by this firm, was a central object of attraction, but what attracted special notice was the rapid and easy process of filling Codd's bottles by the special machinery which was shown. The filling of syphons, and machines for bottling and corking in the ordinary manner, were also shown in operation. A syrup cistern, bottle washing apparatus, and acid tap, so constructed that no part of the metal is exposed to the action of the acid, were among the interesting sundries exhibited by this firm.

Messrs. Dows, Clark & Co. had as usual a variety of very interesting apparatus of ingenious construction. This firm makes machinery on the American principle, which conveys gas into the cylinders from the generators direct without the intervention of a pump. Each method has its advocates, but Mr. Clark's calm assurance of the ultimate triumph of the American system is contagious to anyone who is drawn within the circle of his persuasive eloquence. Besides this kind of machinery, the firm had on view a cleverly constructed bottling machine (the "Excelsior"), taking up little room, and capable of very rapid work, a system of cog wheels relieving the operator vastly. An acid syphon also shown seemed a desideratum which every mineral-water maker must appreciate.

Messrs. Horner & Barker, of Manchester, had a very noticeable show of machinery, which occupied, perhaps, a larger space than any single exhibit in the room. These makers claim some advantages in construction of machinery, especially in regard to the pumps. They assert that the latter work with a more regular action than any other form, and, moreover do not draw in air. They had on view a machine with two cylinders for making different beverages at the same time. From this the pumps can be easily detached, so as to avoid waste of power when only one cylinder is required. Messrs. Horner & Barker had also a single-cylinder machine on view, and most of the supplementary apparatus of a mineral-water plant. All this had the appearance of great strength and good finish. A large automatic filling machine brought forward by them, was, we understand, the first ever exhibited. It is to be worked by steam power, and is intended for large factories. It is said to be capable of filling 250 dozen in an hour. The bottles are placed on a revolving frame, and as they make the circle they receive at one point syrup (if required), and at another the water. Acting automatically, the attendants are obliged to remove the full bottles as they appear, and thus a definite quantity of work can be depended on. Another interesting invention, recently patented by this firm, was a new steam kettle, by means of which, if steam at a sufficient pressure is allowed to pass through it, cold water entering at the bottom from the main can be drawn off almost instantly at boiling temperature from the top. Messrs. Horner & Barker have also a patent stopper, which they made very prominent. The speciality of this is that the stopper, which is a small egg-shaped piece of glass, porcelain, or lignum vitæ, can be adapted to any bottle by first attaching a nozzle to its mouth.

Paint, Varnish, and Resin Stains.

For *white or coloured cotton and woollen* goods, oil of turpentine or benzine, followed by soap suds.

For *silk*, benzine, ether, soap; hard rubbing is to be avoided.

Stearin, Sperm Candles.

For all kinds, use 95 per cent. alcohol.

Wine and Fruit Stains.

White cotton or linen, fumes of burning sulphur, warm chlorine water.

Coloured cottons or woollens. Wash with tepid soap suds or ammonia.

Silks. The same, with very gentle rubbing.

Alizarine Ink.

White cottons and linens. Tartaric acid in solution; the older the stain, the more concentrated the solution should be.

Coloured cottons and woollens and silks. A weak solution of tartaric acid, if the colour allows of its use.

Rust, Nutgall Ink.

White cottons and linens. Warm solution of oxalic acid, dilute muriatic acid followed by granulated tin.

Coloured cottons and woollens. Repeated washings with a solution of citric acid, if the colour is fast.

Silks. Do nothing; all attempts only make things worse.

Lime, Lye, Alkalies.

White cottons and linens. Wash with cold water.

Coloured goods and silks. A weak solution of citric acid applied with the tip of the finger to the spot previously moistened with water.

Acids, Vinegar, Orange Juice, &c.

White cottons and linens. Wash with pure water, or warm chlorine water.

Coloured goods or silks. Ammonia, diluted according to the fineness of the tissue and the delicacy of the colour.

Tannin, Walnut Shells.

White cottons and linens. Javelle Water (Liquor sodæ chlorinatæ), warm chlorine water, concentrated solution of tartaric acid.

Coloured goods or silks. Chlorine water, diluted according to the tissue and its colour, each application to be followed by washing with water.

Tar, Axle Grease.

White cottons and linens. Soap, oil of turpentine, and water, each applied in turns.

Coloured cottons and woollens. First smear with lard, rub with soap and water, and let it stand for a short time; then wash with oil of turpentine and water, alternately.

Silks. The same, using benzine instead of turpentine, and dropping the water from a certain height on the under side of the stain. Avoid rubbing.

MEDICAL GLEANINGS.

Dr. Aquilla Smith has again been elected representative of King's and Queen's College of Physicians on the General Medical Council. He has already served eleven years.

⁂

Adulterated Morphia.—The *Lancet* is informed that there is much adulterated or spurious morphia on the market. Perhaps some of our readers can supply us with more definite information.

⁂

Dr. Burdon-Sanderson, F.R.S., has been selected to deliver the Harveian Oration; Dr. Bucknill, F.R.S., the Lumleian Lectures; Dr. Pavy, F.R.S., the Croonian; and Dr. Ferrier, F.R.S., the Gulstonian.

⁂

Amomum melequela is the name which the *Lancet* has given to the mother plant of Grains of Paradise. Of course, coming from so high an authority, we must immediately alter the *amomum melegueta* of our text-books into the new form (see *Lancet*, October 27, p. 637).

A chemical laboratory has been established in Paris by the Prefecture of Police for analysis of wines which have been declared *suspect* by the tasters. It has cost 8,000 francs, and will be put to use at once.—*Med. Press and Circular.*

⁂

The subscription list for the Liebig Memorial is now closed. It is now proposed to erect one statue at Munich, for which 5,750*l.* has been subscribed, and another at Giessen, the contributions for which amount to 1,200*l.*—*Med. Press and Circular.*

⁂

Collecting Debts in Australia.—The *Melbourne Medical Record* recommends to the notice of its professional subscribers an ingenious way adopted of collecting money due in the Moonta Copper Mining District, that is, to hand over to an auctioneer a list of the debtors, with instruction to sell the debts by auction. The auctioneer advertises every name and item.

⁂

A New Substitute for Litmus.—Dr. E. Luck, a foreigner, has proposed a substitute for litmus, which has the advantage of being colourless in neutral or acid solutions. It instantly becomes an intense deep purple colour on the addition of a trace of alkali. It is phenol phthalein, made by heating phenol with phthalic anhydride and concentrated sulphuric acid.

⁂

Tobacco Diseases.—Mr. Nettleship has contributed to the *Medical Times and Gazette* a series of fourteen cases, in all of which tobacco had had an injurious effect. Most of them were confirmed and large smokers. The characteristic symptom was dimness of sight (amblyopia) more or less pronounced, which was improved in every case by ceasing to use tobacco.

⁂

Morphinism.—This name is given to a new form of vice which seems to be increasing. The vicious indulgence consists in the hypodermic administration of morphia for the sake of the stimulating effects produced. The evil results are numerous and distressing, but they are almost entirely relieved for the time by the administration of a new dose of the drug. The habit or desire grows by indulgence, and at last leaves the patient in a state but little better than insanity.

⁂

Eucalyptus Oil.—Mr. M. H. Lewellin, writing to the *Melbourne Medical Record*, says that he has found eucalyptus oil very useful in preventing the attacks of flies. It may be partially saponified by heating on the water bath an ounce of oil with two or three drachms of sodæ carb. This quantity will then dissolve in a quart of water. It may also be dissolved in spt. vini rect., and used as a face lotion or as spray in the sick room. As long as the scent remains no Australian fly will approach.

⁂

Insurance and Mortality.—Dr. Russell, Medical Officer of Health for Glasgow, states in his report for the three months ending last June that no less than 39 per cent. of the deaths were of persons insured in friendly societies. Twenty per cent. of the children dying under one year of age and 48·5 per cent. of those between one and five years were also insured. As the *Lancet* remarks, before we can decide whether insurance has any effect on infant mortality we must have further statistics, but these figures at least show how desirable it is that such statistics should be provided.

⁂

Comparative Action of Quinine, Cinchonine and Cinchonidine.—MM. Laborde and Dupuis have reported some experiments made on dogs to elucidate this point. The experiments were made by injecting subcutaneously large doses of the alkaloid. One dog, treated with 15 grains of quinine, was, at the end of half an hour, in a stupefied condition. Another was treated with 12 grains of cinchonidine. According to the experimentors there could not have been a more distinctly marked attack of epilepsy than that caused by the alkaloid. Twelve grains of cinchonidine caused a similar but less violent attack. It must be noted that these doses are enormous when compared with the size of the animals to which they were administered.

The "Lancet" on the Composition of Flax.—The *Lancet*, at the end of an article "On Flax Diseases," has the following:—"An analysis of the *fibres* of flax, by Professor Hodges, shows that a hundred parts by weight of the web of flax contained 20·32 parts of potash, 2·7 of soda, 9·27 of chloride of sodium, 19·88 of lime, 4·05 of magnesia, 2·83 of oxide of iron, 7·13 of sulphuric acid, 10·24 of phosphoric acid, 10·72 of carbonic acid, and 12·80 of silica." Add these figures together, and the result is 99·91. This is all very well for the ash, but where is the fibre?

⁂

The Parkes Museum of Hygiene.—Dr. E. A. Parkes, F.R.S., was for a long time Professor of Hygiene in the Army Medical School, Netley, and also a professor at University College, London. In his memory a museum entitled as above is about to be opened at University College. Subscriptions, to the present amount of 800*l*., have been raised, and the college has set apart a room for the museum. It will be in essence a standing exhibition of sanitary appliances, with illustrations of the history and progress of sanitation. The difficulty will not be in finding materials, but in arranging them in the 3,500 square feet which form the area of the museum.

⁂

Quinine Eruptions.—Several cases are reported in the medical journals in which more or less severe eruptions have followed the administration of small doses of quinine. In one case a powerfully built woman was seized with symptoms closely resembling scarlet fever after taking 3½ grains. So closely did the eruption resemble fever that the quinine treatment was continued for eight days, during which the symptoms rather increased than diminished. The fever was high and persistent, and the prostration great. On two other occasions the same symptoms were reproduced in the patient by 1½ grains of the alkaloid. Four other distinct cases are mentioned in which similar results were produced.

⁂

Alcohol.—The Select Committee of the Lords has taken the evidence of Drs. Lauder Brunton, Burdon-Sanderson and Sir William Gull. Dr. Lauder Brunton again assaulted the notion that a glass of spirits keeps one warm. Dr. Burdon-Sanderson said that alcohol was injurious when taken in cases of prolonged muscular exertion and in cases of exposure to cold. Sir William Gull says that every day numbers of persons die from the effects of alcohol in which this cause is never suspected. This and much more say the doctors. They do not speak as teetotalers, nor without experience. Words such as these deserve consideration.

⁂

Heat of the Brain.—The *Lancet* tells us that M. Broca has recently laid before the French Medical Association some curious facts concerning the temperature of different parts of the skull. By numerous experiments he has found that while at rest the temperature of the surface of the head is ·2° Fahr. higher on the left side than on the right. When the brain is active, equilibrium is established. When continuous but moderate mental effort has been maintained for ten minutes the temperature is raised about 1° Fahr. The temperatures of the frontal temporal and occipital regions of the skull are also different, that of the frontal region being more than 4° Fahr. higher than that of the occipital.

⁂

Remedies in Brazil.—Dr. Daunt, writing to the *Medical Times and Gazette*, casually gives some information on Brazilian remedies. He says:—"A neutral substance called Vixirino, from the name of a physician (Dr. Vixira), who was the chief instrument of popularising its properties, has been extracted from the *Cinchona ferruginea*, which abounds in the province of Minas Geraes and parts of San Paulo, and is proved a very effective substitute for quinine, and preferable to this when there is any gastric disturbance. I have employed it on a large scale—now as a tonic, now as an antiperiodic, now as a neurosthenic—with great success. I see that in Europe dog's milk has been recognised as an excellent remedy for rachitic children. Now, for the last 200 years dog's milk has been used in the interior of Brazil for weakly and ill-nourished children. An interesting fact is the successful employment of the flesh of the rattle-snake as broth, and also stewed, in inveterate syphilis, and even in cases which have all the characters of cancer."

Stability of Various Infants' Foods.—Dr. Baginsky, of Berlin, has made some comparative experiments to determine the relative liability to change and putrefaction shown by various foods given to infants. The articles experimented on were human, cows' and Swiss condensed milk, two varieties of farinaceous foods, and two specimens of prepared infants' food. After a 24 hours' exposure to a heat of 67° Fahr., human and cow's milk were found to be unchanged. The Swiss milk and other foods were apparently fresh and wholesome, but were swarming with bacteria. After another 18 hours' exposure the Swiss and cow's milk were found to be coagulated, and the other four foods were in a high state of putrefaction. The human milk was still alkaline and almost unchanged.

⁂

New Anæsthetics.—According to the *Med. Press and Circular*, Professor McKendrick and Dr. Ramsey have been experimenting with substitution products obtained with pyridine and chinoline. The latter of these bases is extracted from quinine by means of caustic potash, but also may be procured by some of the coal-tar series of substitutions. Three grains of the chloride of chinoline introduced into the circulation of a rabbit rendered the animal unconscious in eight minutes, but the pulsation of the heart continued and the breathing was vigorous. The rabbit recovered after two or three hours, and the experiment is deemed highly successful. Some of the other derivatives from these bases proved to be very powerful poisons, having specific action upon the vital centres, and likely to be of use in the materia medica.

⁂

Rheumatism.—Dr. Julius Pollock, in some clinical remarks on rheumatism, clears up some confusion which surrounds this subject. Rheumatism is applied to several different diseases which are essentially distinct, although they have certain features in common. The two chief forms are articular and muscular rheumatism. The former is a disease of early adult life, more or less acute in character, with a tendency to get well in about six weeks. Articular rheumatism, when at all severe, is called rheumatic fever. It attacks the synovial membranes and also the similar serous membranes, especially of the heart. There is a distinct predisposition to this disease in certain persons, which is sometimes inherited. The immediate exciting cause is exposure to cold or "taking a chill." It never attacks the muscles. Muscular rheumatism is a disease of middle and advanced life, is commonly chronic, and will continue indefinitely if not treated. It attacks, not the muscles themselves, but the tendons and other parts of the muscle which have a similar anatomical structure. Muscular rheumatism does not attack the heart, and is rarely fatal.

⁂

Remedy for Consumption.—Dr. Polk, of Philadelphia, by chemical investigation of the bodies of persons who have died of tubercular disease, has proved that in all such cases there is a deficiency of protagon or phosphorised brain-matter in the brain, and especially in that portion which supplies the stimulus required for the proper working of the digestive organs. Independent researches, too complicated to be explained here, have made it very probable that deficient or altered action of the same organs is the primary cause of the disease. Dr. Polk has, therefore, tried the effect of the internal administration of the lacking principle. He has determined its chemical composition and publishes a formula for a preparation. It is called glycerite of kephaline. In the published formula many things are mentioned under indefinite names, so that it is probably impossible to prepare it in England. A. C. Dung, of New York City, is the only manufacturer in America. At the same time it is not a proprietary article. The formula is as follows:—

	Parts
Isolated cerebrate or hypophosph. of ammonium ..	8
Isolated cerebrate or hypophosph. of potassium	3
Isolated cerebrate or hypophosph. of calcium	8
Isolated cerebrate or hypophosph. of magnesium ..	3
Isolated cerebrate or hypophosph. of sodium	8
Glycero hypophosphorous acid (isolated)	5
Cerebric acid	5
Pure glycerine	60

The preparation is almost as clear as glycerine, and has a pleasant acid taste. The dose is 15 to 20 m., with tonics.

Strychnia and Bromide of Potassium.—Dr. A. B. Lyons calls attention in the *Detroit Medical Journal* to the incompatibility of these substances. When strychnia is dispensed with bromide of potassium minute crystals of the former are deposited after a short time, probably in the form of bromide. Bromide of sodium, iodide of potassium, and chloride of sodium produced similar results, but nitrate of potassium and sulphate of sodium seem to have no effect. The danger is that the deposit of crystals from the clear liquid should be unnoticed, and the last dose of the mixture prove poisonous. Such a case did actually occur in America, in the year 1870.

⁂

Poisonous Vinegar.—The *Medical and Surgical Reporter* (U.S.) tells us that the Board of Health of the District of Columbia has condemned five car loads of vinegar sent from Chicago. The condemned article contained 117·26 grains per gallon (·167 per cent.) of sulphate of calcium, and five grains per gallons of sulphuric acid. It is said to be "a fraud upon commerce and a dangerous substitute for vinegar." The reporter goes on to say, "It is asserted that probably one-half the vinegar sold at city groceries is a rank poison, with either sulphuric or other objectionable acids for its base." This wants point and is also sensational. We doubt if even English public analysts or editors would commit themselves so deeply.

Scientific Notes from Foreign Sources.

THE PREPARATION AND PRESERVATION OF PEPSINE.

By M. Andouard.*

After several years' work the author's experiments (not yet concluded) have led him to adopt the following process. The stomach is washed with water, the pepsine precipitated by sodium chloride, and this salt is removed by dialysis. The solution of pepsine is then mixed with its own weight of pure glycerine. It is not indispensable to remove all traces of the sodium chloride, as this salt interferes neither with the digestive nor with the keeping properties of the pepsine.

Thus prepared the pepsine is excessively active, and almost inalterable. It coagulates milk very readily, and digests much larger quantities of fibrine than indicated by the Codex. This digestion, rapid even at 70° Fahr., takes but a very short time at 100° Fahr.

Some solution of pepsine in diluted glycerine has been preserved in a partly filled bottle for more than two years. Although prepared under defective conditions it is still limpid, and neither colour nor odour show any change.

THE PREPARATION OF LIQJOR FERRI ACETATIS.

The liquor ferri acetatis (Ph. Germ.) is prepared by dissolving freshly precipitated ferric hydrate in acetic acid, sp. gr. 1·04. The ferric hydrate is prepared by precipitating with ammonia 10 parts of solution of ferric sulphate, sp. gr. 1·318 ($\frac{7}{9}$the strength of B.P. sol.). The precipitate is collected on a strainer, washed, and pressed. G. Mankiewicz recommends in the *Archiv. der Pharmacie* that to avoid the tediousness of the latter operations the moist precipitate should be exposed for some hours to the temperature of – 5° C. (23° Fahr.). It is then to be allowed to thaw gradually, when the water will run off. This ferric hydrate is easily soluble in acetic acid, sp. gr. 1·040. The quantity here indicated dissolves in six parts of acid of this strength, forming a solution of sp. gr. 1·050, which must be diluted to sp. gr. 1·136 with distilled water.

COMPOUNDS OF CHLORIDE OF AMMONIUM WITH CHLORIDE OF POTASSIUM AND CHLORIDE OF SODIUM.

M. E. Chevreul has communicated to the *Journal de Pharmacie et de Chimie* a paper on the above subject. His attention was called to it by finding in some guano cubical crystals, which, on analysis, proved to contain chloride of ammonium and chloride of sodium. By a large number of experiments he has been convinced that chloride of ammonium will form crystalline compounds with the other alkaline chlorides. These crystals are of two forms. One, cubical, is formed when chloride of ammonium is mixed with one, two or three equivalents of chloride of sodium, or with any proportion of chloride of potassium. The others, needle shaped, are formed in solutions of chloride of ammonium and sodium when the latter is in the proportion of two or three equivalents to one of the former. The composition of both forms of crystals is very various.

ALCOHOLATE OF CHLORAL.

M. Ad. Wurtz, in a short note in the *Journal de Pharmacie et de Chimie*, tells us that at the temperature of 100° C. both this substance and chloral hydrate itself are completely decomposed. The formulæ of the products formed by the decomposition of the alcoholate are C_2HCl_3O and C_2H_6O.

ON BITTER ALMONDS.

By M. Portes.*

Bitter almonds, when immature, do not give the same chemical reactions as the matured fruits. The author proposed to himself the following questions with a view to explaining this curious fact. 1. Do bitter almonds contain amygdaline in their youngest state? 2. Is their composition always different to that of sweet almonds? 3. If amygdaline is always present, but not emulsine, when does the latter make its appearance? 4. Whence does the amygdaline take its rise? Is it localised in any part of the fruit? 5. How does this substance reach the cotyledons. To answer these questions the author has made numerous anatomical and chemical analyses of the fruits at different stages of growth. One curious fact has been proved, namely, that amygdaline of young almonds is so unstable that the weakest influences, such as ammoniacal fermentation, yeast, or alkalies all decompose it.

The final results may be summarised under the following heads:—Young bitter almonds always contain a certain proportion of amygdaline. Their composition is always different from that of sweet almonds. The embryo alone contains emulsine, and is only slowly formed. The amygdaline is confined to the teguments of the seed; its origin is not known. Little by little this substance leaves the teguments and penetrates the cotyledons through the radical.

EXTRACTUM ERGOTÆ LIQUIDUM FOR HYPODERMIC INJECTIONS.†

Coarsely powdered ergot is treated with carbon bisulphide to remove the fixed oil. It is then exposed to the light and air until all odour of the solvent has disappeared. It is then to be percolated by cold distilled water containing 4 per mille of tartaric acid. The solution is boiled to precipitate albuminous matters, and reduced in a water bath to one-third its volume. It is to be cooled and filtered, then digest it with a slight excess of calcium carbonate to remove excess of tartaric acid, filter, evaporate to a syrupy consistence, and precipitate it by means of 90° alcohol. After a second filtration, it is to be decolourised with washed animal charcoal, filtered, and the alcohol driven off. Distilled water is to be added, and ·15 grain of salicylic acid for every 100 grains of ergot used. It is then to be diluted so that its weight is equal to the ergot employed. It is left for a few days to deposit, and is then bottled in small vials. It is said that this preparation thoroughly represents its own weight of the drug.

VARIETIES OF VANILLA.

The German Chemical Society's journal for September contains some interesting estimations of the quantities of vanillin found in various vanillas examined by Messrs. Tiemann and Harmann, the discoverers of "artificial vanillin," announced a year or two ago. Their record shows that Mexican vanilla yielded from best quality (1873 harvest) 1·69 per cent. of vanillin; ditto (1874 harvest), 1·86 per cent.; medium quality, 1·32 per cent. From five samples of best quality Bourbon vanilla (1874 and 1875 harvests) they obtained, respectively, 1·91, 1·97, 2·43, 2·48, and 2·90 per cent. From small and medium (Bourbon) they obtained from ·75 to 1·55 per cent. One sample of best Java vanilla (1873) contained 2·75 per cent.; medium (1874), 1·56 per cent.

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* From *L'Union Pharm.*

* *Journal de Pharmacie et de Chimie.*

† M. Yoon in *Journal de Pharmacie et de Chimie.*

Former investigators had announced the presence of benzoic acid in vanilla, but the authors have not found it. They believe that vanillinic acid, or a mixture of that and vanillin, had been mistaken for benzoic acid. They add, however, that benzoic acid is sometimes sprinkled over vanilla in order to give it the appearance of an exuding crystallisation.

THE ATOMIC WEIGHT OF SELENIUM.

THIS has been the subject of a series of investigations and relative determinations by Otto Pettersen and Gustav Ekmann, and their observations are recorded in the German Chemical Society's *Berichte* for September. They fix it at 79·08, remarking that the first decimal place is certain, the second as near as can be attained.

ANTIASTHMATIC CIGARETTES.*

EQUAL parts of belladonna, stramonium, digitalis and sage leaves are made into a decoction with 200 parts of water. Eight parts of tinct. benzoin simp. and fifteen parts of nitre are then added. Bibulous paper is to be soaked therein for twenty-four hours, and then dried. It is cut into slips $3\frac{1}{4}$ inches long and $2\frac{1}{2}$ inches wide, which are to be rolled into cigarettes.

GOUTTES RUSSES OR RUSSIAN DROPS.

By M. Niemeyer.

THESE are composed of—

	Parts
Ethereal tincture of valerian	8
Ipecacuanha wine	4
Sydenham's laudanum	$1\frac{1}{2}$
Oil of peppermint	$\frac{3}{10}$

AN EXPLOSIVE MIXTURE.

HANS M. WILDER informs us, in the *American Journal of Pharmacy*, that carbonate of ammonia in simple solution becomes explosive when the temperature has risen to 90° Fahr. in the shade. He ascribes the explosion to the evolution of carbonic acid gas, and says that solutions must be made in summer time with iced water. If his explanation be correct, it is certainly extraordinary that dissociation should take place at such a low temperature.

THE HYPNOTIC ACTION OF LACTIC ACID.

DR. PREYER, of Jena, some time ago advanced a theory to explain the physiological cause of sleep. He believes that natural sleep is caused by the accumulation in the blood of the products of muscular work. One of these products is lactic acid, and it is universally acknowledged that lactates do accumulate in the blood in the proportion that fatigue increases. Several series of experiments have been made to test this theory. The latest is described in a recent number of the *Medical Examiner*. Dr. von Bötticher, of Jena, administered lactate of sodium by the mouth to 23 patients on 60 occasions, every precaution being taken to eliminate sources of error. On 21 occasions a decided hypnotic effect was the result shown in nine cases by a profound slumber which lasted until the patient was roused. In the remaining 12 cases the symptoms observed were yawning and tendency to sleep, languor and relaxation, and a general look of fatigue, lasting for several hours. Dr. Bötticher, experimenting on himself, found that the lactate produced on the day following its administration a sensation of extreme fatigue in the lower extremities, like that produced by prolonged exertion. The 29 cases in which the hypnotic effect was not produced cannot yet be explained. Still as the experiments were performed in hospital wards, it is quite possible that some unavoidable cause of excitement was present which counteracted the effect of the drug.

A NEW ADHESIVE PLASTER.

THE *Medical and Surgical Reporter* gives the following recipe for an excellent and supple plaster, far cheaper than the resin and diachylon, and which lasts for more than a year without deterioration:—Three or four layers of a mixture of 20 parts of mucilage and 1 part of glycerine are to be spread over each other on the linen or other stuff, allowing sufficient intervals for the successive layers to dry.

METAMORPHOSES OF THE CANTHARIDES (CANTHARIS VESICATORIA).

By M. Lichtenstein.

FOR forty years the author has been endeavouring to trace the history of the cantharides from the egg to the perfect insect. Only this year has he succeeded in the attempt. On June 27 he gathered some fecundated females from an ash tree and confined them in a glass jar containing earth. Two or three days after they laid, in little cylindrical holes they had made, white hyaline eggs, agglomerated in masses of 30 to 60 each. Seven days after, small larvæ, named triongulins by Dufour, appeared from the eggs. They were a millimetre long, of a deep brown colour, with the meso and metathorax and the first segment of the abdomen whitish. The abdomen has at the extremity two long threads. After numerous tedious and unsuccessful trials, the author persuaded these little creatures to feed on the stomachs of bees killed in the act of sucking honey from flowers. Five or six days afterwards, when they had much increased in size, their skins split and a new form of larva appeared. These were milk white, without caudal appendages, and with a soft skin instead of the leathery envelope from which they had just emerged. After more unsuccessful trials these were induced to feed on the concreted honey of a bee of the genus Ceratina. They grew and three times cast their skins. The jaws, at first smooth and pointed, gradually acquired on the inner surface one and then two teeth; the antennæ changed their form; the eyes, at first prominent, gradually diminished, and after about thirty days, when the larva had increased to about two centimetres in length, it showed signs of wishing to change its condition. It was allowed to burrow in the earth in a glass tube which could be withdrawn for examination. Nine days after, on September 17, it was found that the lava had changed to a true chrysalis with a coriaceous shell. It was slightly curved, of a clear brown, with the head and feet showing themselves under little rounded projections. The final transformation from the chrysalis to the perfect insect will not take place until next spring. Up to this time only the first stage of the metamorphosis, that of the two-tailed larva, has been known. A complete account of the transformation, with illustrative drawings, will appear in the *Annales de la Société Entomologique de France.*

We learn from the current number of *Science Gossip* that specimens of the mature beetle have been occasionally found in England.—*Journal de Pharmacie et de Chimie.*

MERCURIAL OINTMENT IN LESS THAN AN HOUR.

M. JULES GIRAUD finds that the most expeditious method of preparing this ointment is to harden the lard with a certain proportion of wax. Two hundred and fifty parts of lard are melted with 120 of vegetable wax, and 690 parts of mercury are added while the mixture is still hot. After the metal is extinguished, 200 parts of olive oil are added.

ADULTERATION OF VALERIAN ROOT.

PROFESSOR CHARBONNIER, of Caen, remarks in the *Journal de Pharmacie et de Chimie* that the valerian root of commerce is sometimes mixed with as much as 30 per cent. of radix vincetoxici. The properties of the latter drug are suspicious, but not too well known. It is said to possess powerful emetic properties, and was formerly in request as an alexipharmic, that is, as a preventive against all poisons. It is advisable to be on the watch for this adulteration.

SALICYLATE OF SODA IN DIABETES.

A GERMAN medical journal reports two cases of diabetes which have been radically cured by the application of salicylate of soda.

The first case was that of a farmer 56 years old, and the dose given was 8 grammes daily. The quantity of sugar fell rapidly from 260 grammes per day to 40 grammes only, and continued to fall rapidly from 40 to 10, and 10 to 5, and 5 to 1 every succeeding day. Traces of albumen and deafness were removed by a decrease in the dose. The cure was radical, and the patient is perfectly restored to health. Another case was that of a young girl of 14, giving at the time 320 grammes of sugar daily. She was entirely restored to health after 21 days' treatment by 7 grammes of salicylate of soda daily.

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* *Journal de Pharmacie et de Chimie.*

THE CHEMIST AND DRUGGIST

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THE
ANALYSED TEA ASSOCIATION,
And Opinions of the "Lancet," &c.,
See Page 49.

EDITORIAL NOTES.

PRESCRIBING AND DISPENSING IN NEW ZEALAND.

THE representatives of the doctors in the New Zealand Parliament have made a bold effort to extirpate the prescribing chemist in that colony. A Medical Practitioners Amendment Bill, lately introduced, caused a good deal of excitement among the pharmaceutical fraternity. The object of the bill was of course merely to check the practices of "those terrible scourges of society who, not knowing the difference between simple ailments and serious disease, rot and injure the health of the public by quackery and all its attendant evils." Most generously the bill provided that "nothing in the Act was to affect chemists, druggists, and dentists in their trade of selling, compounding, and dispensing medicines," but it would have made them liable to a *50l.* penalty for any action which could be legally represented as prescribing. When the House of Representatives came to the second reading of this modest bill, the opinion of all but a very small knot of enthusiasts was so strongly opposed to it that its promoters did not venture to challenge a division, but accepted the inevitable in the most graceful manner they could assume. It would be a kindness to bring this little lesson to the notice of our Medical Defence friends in England. An anonymous correspondent of the *New Zealand Mail* (Wellington, N.Z.), in discussing this bill, makes some remarks so pertinent and forcible, and so equally applicable to our own difficulties at this moment, that we gladly transfer them:—

"It is the interests of the community," he says, "that ought to be the primary consideration over doctor and druggist alike. What grave reason is there that the valuable knowledge of domestic medicine possessed by chemists and druggists should not be available to the community? As a fact, in the slighter ailments of both adults and children the chemists stand in the position of trusted advisers to a large section of the people who cannot afford professional charges. Till the doctors can substantiate such serious evils having already resulted from chemists prescribing as would more than counterbalance the universal public benefit that has thus resulted to all classes, they have no right to clamour for prohibition. The doctors are very well protected without needing a monopoly. They have a stringent trade union which regulates admission to their ranks and exacts an exceedingly liberal payment for labour. No one can assume their designation, they alone can sue in courts, and in the professional coroner and the professional *post mortem* they in some degree possess the privilege of the House of Lords, that of being tried by their own peers. If the Medical Bill is proceeded with, some notice ought to be taken of private dispensing by medical men, and how far it is compatible with the safety of the people generally. The effect is that patients know nothing of what they are taking; there is no compulsory record of the prescriptions in case of misadventure or worse, and allowing cheerfully the high moral and intellectual standard of doctors generally, and conceding their invaluable services, the profession is no more exempt from an occasional black sheep than any other section of the community and secret dispensing puts a terrible weapon in his hands."

HIGH-PRESSURE BUSINESS.

Poor Dr. Ayer, of New York, is, as we have before mentioned, spending what ought to be the happiest days of his life in a lunatic asylum. He has worked hard to amass a fortune, and his wealth is estimated at $15,000,000. This was gained by business tact, untiring perseverance, and bold enterprise. No doubt these are qualities to imitate, but even they may be overdone. The *mens sana* is a high price to pay for three millions sterling, or for thirty millions. According to an American journal Dr. Ayer went into business for himself before coming of age. He left even Benjamin Franklin's sage business maxims far behind. He disregarded the precept, "Early to bed and early to rise." It was not enough for him. He went to bed late and arose early. He worked 20 hours out of every 24. He lived to make money. His devotions were unceasing at the altar of business. He thought business, talked business, and dreamed business. Business prospered. He moved from a small store to a large one, and from that to one larger. He was one of the representative successful men. He was pointed out as a model of what could be accomplished by industry, patience and perseverance. He lived in the shop, and could never get out of the shop. The great globe, with all its beauty and grandeur, with all it had to give of thought, association and sentiment, was for Dr. Ayer but a huge pill and a place whereon to make and sell pills. Other worlds than ours, if reached, would for Dr. Ayer only have meant other little and big planetary pills and homes for sick Mercurians, Jupiterians and Saturnarians, who should cure all diseases with Ayer's pills. That was all the universe implied to Dr. Ayer. Mind thus shoved, forced, pressed and crammed into one idea, at last that idea dominates and masters the man. Too much pressure for years of pills and business. No other thought or occupation to serve as a balance. The regulator gives way. Now he wanders about the grounds of a private asylum, and the man of fifteen millions is overjoyed if he can drive an imaginary bargain with his keepers for an old window sash and realise 10 cents by it. The guardians of his $15,000,000 receive $15,000 or $20,000 a year for taking care of it, and the man of over-much business begs and whines in vain for the loan of $40.

THE PREVENTION OF HYDROPHOBIA.

In view of the prevalent alarm concerning hydrophobia the *Medical Press and Circular* points out that people may easily adopt some simple precaution that will at least enable them to go about with a feeling of safety. This might consist in everyone at all exposed to the infection carrying in his pocket one of those little cases of lunar caustic that may be purchased in any chemist's shop for sixpence. If the point of this were to be thrust deep into the wound immediately the person was bitten by a dog, he might consider himself as safe as if he had never been bitten. But the success of this simple operation consists entirely in its being practised directly the wound has been inflicted, and there could be no better means of doing this than having the caustic always at hand. The excision of the part, or the application of a red-hot iron, might involve much delay, and during this delay the virus is absorbed into the system. It would be as well, too, if the person bitten sucked the wound before applying the caustic. Chemists might, with advantage, help to bring this suggestion more prominently forward.

IS COPPER POISONOUS?

Prejudices, especially when malevolent, are very long-lived and hard to kill. Copper has been labelled poison for many centuries, and the mere mention of that metal has been sufficient to convulse a whole neighbourhood with fright. Those dealers who pander to a foolish popular taste by colouring pickles and preserved vegetables with copper, have been held up to execration as depraved ogres, who, not content with devouring their customers, cruelly torment and destroy their lives by an insidious slow poison. If it were not for the fact that this idea is expressed and inferentially approved by some of the recent medical journals, we should not have ventured to bring before our readers a subject which has been so recently discussed. Truths, however, lose little by repetition. Indeed, it is sometimes necessary to repeat them in order that they may be properly appreciated. We will, therefore, briefly mention some of the facts which have been recently established.

It has now been finally determined by the researches of various chemists that copper is invariably present in the liver and some others of the larger organs of the body. It is true that it occurs in small quantities only. But its presence is undoubted. Such being the case, we can hardly doubt that it is necessary in some unexplained way to the proper fulfilment of the functions of the body. The experiments of Dr. Paul and Mr. Kingzett, described by them at the Conference, prove at least that when considerable quantities of copper are taken the system refuses to absorb more than a very small amount, and that it rejects the remainder without difficulty.

Numerous facts have been brought forward recently which prove that small quantities of copper may be taken for long periods without the slightest effect on health. Inhabitants of copper mining and smelting districts, who inhale copper with the air they breathe, and drink it in their water and tea, are not remarkable for a high rate of mortality or disease. Other facts might be adduced to the same effect.

When these points are considered it is impossible to believe that peas or pickles are deleterious when coloured with less than a quarter of a grain of copper per ounce, or to agree with a recent medical journal when it insinuates that such preparations are injurious to the health, or destructive to the lives of Her Majesty's subjects.

At the same time, like most of the mineral ingredients of the human body, copper is undoubtedly poisonous when taken in large quantities. But no one would think of denouncing the use of salt with our eggs because persons have been poisoned by consuming large quantities. We do not label potassium as a poisonous metal, or put nitre on the poison schedule because an ounce of the latter has been known to cause death. Sulphate of iron is decidedly poisonous when taken in quantity, but no one would therefore forbid the use of steel wine or chalybeate waters.

ACCIDENTAL POISONING.

Two cases of accidental poisoning have occurred recently, which have suggested some remarks in the medical papers on the advisability of using special poison bottles. In one case a person named Clark, an out-patient of the Lowestoft Infirmary, took an aconite liniment instead of his right medicine. The jury returned a verdict of accidental poisoning. In the other case the dispenser at the Brownlow Hill Workhouse, Liverpool, filled a bottle with carbolic acid instead of cough mixture. "A death was the result." The *Lancet* does not say what the jury's verdict was. If a chemist had been the offender we should probably have had one or two leaders on the case. As it is, some of the remarks made are interesting. The *British Medical Journal* thinks that more effective measures might be taken for signalling "danger" by the touch as well as by the sight. It then adds a long and complicated sentence, which touches on the frequency of accidental poisoning, the credible value of Messrs. Savory & Moore's liniment bottles, the "peculiarly painful and deplorable character" of the "unhappy casualties," and finally finishes with a most pathetic and rhetorical description of the physician and patient. The *Lancet*, on the other hand, seems more familiar with the ordinary routine of a dispenser's, or a druggist's, occupation. It cannot believe that the administrators of large institutions do not insist on the use of glaringly peculiar bottles. And at the same time it remarks that "there is no possible excuse for the universal application of this rule," adding the rather inapposite remark that there is now an abundant choice of poison bottles.

BRAZILIAN DRUGS.

All chemists and pharmacists are probably aware that the museum of the Pharmaceutical Society has been recently enriched with an extensive collection of East Indian drugs. Everyone will appreciate the value and interest of such collections, which, it has been said, represent to a large extent the Materia Medica of the future.

It has occurred to us that a large society like the Pharmaceutical Society of Great Britain should not depend entirely on the generosity of persons residing in distant climates. If collections of native drugs are valuable, some systematic effort might at least be made to obtain them. This effort should probably be made at first through those rulers who are known to take an intelligent interest in science, and to possess the desire of developing the resources of the districts they govern. The name of one such ruler is familiar to the ears of all Europe. We mean the Emperor of Brazil. The country he governs is remarkable for the richness and variety of its vegetable products, and for the number of native drugs used by the populace. Very few of them are found in our Materia Medica. We think that the Pharmaceutical Society would be doing a desirable and honourable act if they formally requested that a series of the medical productions of Brazil should be sent to their museum, assigning as reasons for the request that the cause of science would be thereby promoted, and the productions of the country brought under the eyes of the world.

SOCIETY OF ARTS.

The programme of the arrangements for the coming session has just been issued. The opening meeting will be held on the 21st inst. At the second meeting, on the 28th a paper will be read on "The Telephone," by Prof. Bell, the inventor, and among the other papers to be read before Christmas is one on "Freedom in the Growth and Sale of the Crops of the Farm considered in its bearings upon the Interest of Landowners and Tenant Farmers," by J. B. Lawes, Esq., F.R.S. Three courses of "Cantor" Lectures are announced:—First course, on "The Manufacture of Paper," by William Arnot, Esq., F.C.S.; second course, on "The Application of Photography to the Production of Printing Surfaces and Pictures in Pigment," by Thomas Bolas, Esq., F.C.S.; third course, on "Some Researches on Putrefactive Changes, and their Results in relation to the Preservation of Animal Substances," by B. W. Richardson, Esq., M.D., F.R.S. The second and third courses do not commence till after Christmas, as is also the case with the first meetings of the Chemical, African and Indian Sections. An additional course of three lectures, on "Explosions in Coal Mines," is to be delivered by T. Wills, Esq., F.C.S., on three evenings in January and February. It is stated that the conference on "Health and Sewage of Towns" is to be repeated, and that a second "Congress on Domestic Economy" will be held this year at Manchester.

THE INTERNATIONAL PHARMACOPŒIA.

They are getting on with that International Pharmacopœia. Without going into ancient history, we may in a few words recapitulate what has been done in recent times. At Vienna in 1869 the Pharmaceutical Council commissioned the Pharmaceutical Society of Paris to prepare the first elements necessary for the realisation of the project. That was their way of putting it. The Paris Society steamed away, and by dint of energy got a report ready for the Pharmaceutical Congress at St. Petersburg in 1874. This congress came to some solemn conclusion on the subject, to the effect that they thought the time had come for the production of this much desired work. They passed a vote of thanks to the Paris Society, and appointed another committee to examine the results of their labours. The delegates returned to their respective homes, and some of them (ours, at any rate) burst forth into eloquence, as they contemplated the approach of the day which should see the birth of this glorious International Pharmacopœia.

The subject was now fairly afloat, and at Brussels in 1875 it was brought before the International Medical Congress. That august body accepted the principle, and—engaged a man to produce the book? Nothing of the kind. Appointed another committee.

At the International Medical Congress at Geneva, last September, 360 gentlemen, sane in other respects, indulged in a further discussion of the subject. They resolved as follows:—That the International Codex shall be in Latin. That the metric and centigrade systems are to be adopted. That at fir the compounds for dispensing therein defined shall be limited to energetic medicines. That names of compounds, chemicals and others, shall be as simple as possible. That the minimum of the active principles of the chief drugs shall be rigorously fixed, as well as the maximum of impurities. This Congress then appointed another committee.

The committee was to be composed of physicians and pharmacists representing the different countries. This is the modest assembly which claims such representative position. Physicians:—Dr. Wilkinson, Manchester, president of British Medical Association; Dr. Marion Sims, of everywhere; Dr. Seguin, of New York; Prof. Gubler, of Paris; and M. Pacchiotti, of Turin. Pharmacists:—Profs. Gill, of Brussels; Madsen, of Copenhagen; and Brun, of Geneva. There is not a single representative of Germany, Austria, Russia, Holland, or Spain on the committee. What will Mr. Greenish say?

And this committee is instructed to apply to the various Governments, asking them to appoint official delegates to aid in the realisation of the scheme. Can the force of absurdity be carried further?

WHAT IS THE FUNCTION OF THE SALIVA?

Whenever the functions of the different organs and secretions of the human body are discussed, we generally find that the function of the saliva is said to be complex. It assists in deglutition, but at the same time it acts as a ferment and causes the conversion of the insoluble starch of amylaceous foods into soluble sugar. It is impossible to obtain pure saliva. Immediately it is secreted it becomes mixed with the secretion of the mucous membrane which lines the mouth. Hence we can only discuss the effects of the buccal mucus, the combined secretion of the mucous membranes and the salivary glands. When bread is macerated in this mucus at the temperature of the body it is partially converted into glucose or grape sugar; but this only takes place after some hours. It is further necessary that the mucus should be alkaline, for the action immediately stops on the addition of an acid. In the ordinary process of mastication bread does not remain long enough in the mouth for any action to be established. Immediately it is swallowed it becomes mixed with the acid gastric juice, and the action of the saliva in converting starch into sugar is stopped for ever. More than twenty years ago Dr. P. B. Ayres proved that the mixture of saliva and gastric juice found in the stomach had no action on starch.

It is not a necessary part of our subject to define when and where starch is made soluble and assimilable. But we may indicate that in Dr. Ayres's paper, which was published in the *Quarterly Journal of Microscopical Science*, vol. iii., p. 247, 1855, it is proved that the agent in this process is the mucous secretion of the intestinal canal.

The idea that saliva does convert insoluble starch into digestible sugar should be abandoned as part of that heritage of errors we are continually endeavouring to escape.

FRENCH JUSTICE.

Surely M. Simonne, of Rue Jean d'Arc, Rouen, is a martyr. He is or was a mineral water dealer, selling 500 bottles a day. Alarmed lest this great sale should exhaust the natural sources, he entered zealously into the work of increasing their supply. At first his plan was both simple and ingenious. When he received a case, say of Friedrichshall, he removed from each bottle one-fifth of its contents, and transferred this portion to others. He then filled the vacuum from the town pump, or rather fountain, well known for its mild and wholesome harmlessness. Thus by his necromancy he increased eight bottles to ten. But the economy thus effected not being sufficiently rapid to meet his ideas, M. Simonne entered on a more complex and costly enterprise. He procured a soda-water machine! In this machine he manufactured all the natural mineral waters he dealt in. Eau de Saint Galmier was made with Seltzer water. Natural Vichy water he tried to make with Sel de Cusset, but not succeeding he adopted Vichy salt or bicarbonate of soda. Two bottles in every ten were filled with his own manufacture.

This vigorous philanthropist has been (as is so often the case) grossly misrepresented and misunderstood. One morning the minions of justice made an unexpected descent on his premises, and seized his machine, capsules, corks, and last but not least, his own private person. So cruelly was he misrepresented by persons who had been in his employ and had assisted him in his philanthropic labours, that in spite of a pathetic appeal from the counsel for the defence, he was brought in guilty. A horrible accumulation of unpleasant things was forthwith heaped on him by the presiding judge. He was sentenced to three months' imprisonment, 50 francs fine, the articles seized were to be confiscated, the judgment to be inserted *in extenso* in the *Journal de Rouen* and the *Nouvelliste de Rouen*, as well as on a dozen posters to be placarded on the walls of the town, and finally the expense of all this entertainment was saddled on to M. Simonne himself.

RENEWAL OF PRESCRIPTIONS IN GERMANY.

The renewal of all prescriptions containing active medicines, such as purgatives, emmenagogues, or opiates has just been forbidden by law in Germany. Pharmacists may only supply such on the order of the doctor who prescribed it.

THE ECONOMIC USES OF FLOWERS.

By P. L. Simmonds.

Of the various parts of plants used industrially the flower would seem to be that of least importance, and yet this enters more than would be at first supposed into commerce, and many are of the greatest importance to the perfumer and dyer. Not to speak of the trade in cut flowers and flowering plants, and the extensive commerce carried on in these in great cities, and passing over a considerable branch of trade in what are known here as "everlasting flowers" and "immortelles" on the Continent, an acre of which plants will yield two or three tons weight of tufts of flowers, realising from 12*s.* to 16*s.* per cwt., a few details may be given serving to illustrate the commercial value and various uses of flowers.

Among the most important products in a commercial point of view are safflower, saffron, rose leaves, lavender, pyrethrum, orange blossoms, cassie flowers, violets, jasmine, tuberose and camomile flowers.

Safflower, from the deep orange petals of the *Carthamus tinctorius*, is obtained in parts of Southern Europe, India, and China, the latter being considered the best. The imports of safflower into this country vary considerably, having reached as much as 32,000 cwts. in some years, but in the last two years our supplies have dropped to about 3,000 cwts. The great centre for the use of this dyestuff appears to be Lyons, where it is employed to dye silks and satins.

We also import from 3,000 to 5,000 lbs. of extract of safflower, worth from 1,000*l.* to 1,760*l.* The exports of safflower from India exceed in value 100,000*l.*, and from China they are about the same amount, to say nothing of the local consumption in Asia and the produce in Southern Europe.

Saffron is obtained from many countries, but the preparation is chiefly confined to France and Spain. The total value of the saffron produced annually is estimated to amount to one million sterling. About 30,000 flowers are required to produce 2 lbs. of fresh pistils, which when dried are reduced to one-fifth of that weight. Pereira says it takes nine flowers to make up a grain of marketable saffron, so that it would require no less than 4,320 flowers to yield 1 oz. Some, again, assert that to produce 1 lb. of dry saffron 107,520 flowers are necessary, while others put the quantity as high as 203,920 flowers. According to Dumesnil, in the *Académie des Sciences*, 7,000 to 8,000 flowers are required for yielding 17½ ozs. of fresh saffron, and this weight, as already stated, is reduced one-fifth by drying.

Our imports of saffron are, compared with its use on the Continent, not very large. They were:—

	Lbs.	£
In 1867	9,401	17,963
,, 1868	26,048	50,198
,, 1869	22,152	36,596
,, 1870	43,950	95,690

The imports into this country have not been published since then. The largest quantity comes from Egypt (nearly half), then follow the supplies of Spain and France, varying in quantity according to the crop. Judging by prices, the Spanish would appear to be held in less estimation than formerly.

Very extensive rose farms exist at Shiraz, in Cashmere; at Ghazepore, in India; at Adrianople, in European Turkey; and at Broussa and Uslak in Asiatic Turkey; and about Cairo and other parts of Egypt. It was the Princess Nour-Djihan who discovered, at the commencement of the sixteenth century, the essence of roses in the empire of the Mogul, and received for this a necklace worth 3,000*l*. In 1611 the Sultan Ahmoud I. sprinkled the pavement and the interior of the new Kasbah with jets of rose water. It is also said that Saladin, after the Peace of Jerusalem in 1187, sprinkled tho Mosque of Omar with rose water from Damascus. The odoriferous rose was formerly cultivated in the oasis of Fayoum, Middle Egypt, but the culture has been almost abandoned. The essence used locally there is now chiefly obtained from the ordinary roses of the country, collected in spring in the gardens.

Experience has shown that for every ounce of otto of roses 3,000 lbs. of rose leaves are required.

The yearly production of the districts in the province of Kezanlik is on an average 3,500 lbs. Some years, however, the bushes are exceptionally prolific. Thus in 1866, 6.000 lbs. were produced, but in 1872 only 1,700 lbs. could be obtained. The war now raging in this district has, however, made sad havoc with the rose gardens, and destroyed for a time the produce. The pure attar, at 30*s*. per ounce, yielded an income of 84,000*l*. yearly to Roumania. Of rose leaves we imported—

	Lbs.	£
In 1867	8,775	476
,, 1868	5,323	267
,, 1869	6.427	321
,, 1870	8,382	420

Since that year there has been no official return published.

They are usually imported salted: 1 lb. of salt well mixed with one bushel of roses (6 lbs.) converts them into a magma (pickle). As their primitive odour is preserved they can be distilled at any time, and produce as good rose water as fresh roses. The Provence rose will yield in tho second and third year from one to two hundred bushels of roses per acre. The Damask rose is that chiefly cultivated for medicinal purposes. Just before the bud is about to open it is plucked, and the bottom of the bud is cut off. These cuttings are termed "rose heels;" the top is preserved either to make infusion of roses or conserve of roses.

M. Piver some time since published the following statistics of the flowers employed in perfumery annually produced in the department of Les Alpes Maritimes:—

	Kilos.
Roses	904
Orange flowers	61,218
Jasmine	62,500
Tuberose	18,200
Cassie	35
Violets	86

The yield of flowers per 1,000 metres (not quite a quarter of an acre) he gave as follows:—

	No. of plants	Flowers
Roses	1,200	300
Oranges	25	250
Jasmine	3,500	130
Tuberose	17,500	500
Cassie or Acacia	750	750
Violets	—	200

The lavender fields in the London district cover about 500 acres, and the yield of essential oil varies from fifteen to thirty pounds weight per acre, according to the season or age of the plants.

Several species of *Pyrethrum* are grown in parts of Europe—*P. carneum*, *roseum*, &c.—for their flowers, which are very obnoxious to insects, and are sold when powdered under the name of Persian or Caucasian insect powder. In 1870 these flowers were exported from Ragusa to the value of 1,104*l*. That from the Caucasus is the best. The amount of this powder consumed annually in Russia is said to be about 500 tons. A quantity of these plants, grown upon 18 square rods, is estimated to furnish nearly one hundredweight of powder, which is best preserved in closed vessels of glass. As generally sold, the powder is very much adulterated and worthless, often mixed with sumach. A good insect powder ought to stupefy a fly in one minute if four grains are sprinkled on it in a vial, and death should ensue in two or three minutes. Some of the commercial insect powders, however, require fifteen to thirty minutes to kill a fly.

Incidental mention may now be made of some of the other uses of flowers at home and abroad.

The medicinal substance called semen-contra is obtained from plants belonging to the family of Composites: according to Batka it is yielded chiefly by *A. Sieberi*, Besser. The flower-head is the part of tho plant employed. Santonine, the active principle of the drug, is valued as a vermifuge.

In France the flowers of *Malva sylvestris* and *rotundifolia*, and of *Althæa officinalis*, *Nymphæa alba*, *Verbascum Thapsus*, *V. sinuatum*, and *V. nigrum*, are officinal, emollient, and demulcent, furnishing a pure mucilage.

The marsh mallow is cultivated in certain districts of England, and held in repute as a medicinal plant, being used chiefly in fomentations and gargles.

The flowers of the well-known marigold (*Calendula officinalis*) were formerly used in soups and broths and as a carminative, but they are now chiefly employed to adulterate saffron.

The flowers of *Lyperia crocera*, of South Africa, resemble true saffron in smell and taste, and have similar properties: yielding a fine orange colour, they have been imported into this country for dyeing purposes. The flowers are in daily request with the Mahomedans at the Cape, who use them for the purpose of dyeing their handkerchiefs. They possess similar properties to saffron, and as an antispasmodic, anodyne and stimulant, according to Dr. Pappe (*Flora Capensis*) ought to rank with the *Crocus sativus*.

The flowers of the yellow ladies' bedstraw (*Galium verum*) have been used in England in the place of rennet to coagulate milk.

Saffron flowers and those of the Eebuch are employed for dyeing in Turkey. Those of *Althæa filicifolia*, Cav., are used in Turkestan to form cataplasms for inflammatory swellings.

The extremely fragrant flower-heads of *Santolina fragrantissima*, Forsk., are sold in the shops of Cairo as a substitute for camomile, under the name of Babouny or Zeysonm.

An infusion of the dried blossoms of the common cowslip is drunk in some counties in England under the name of Paigle tea. The blossoms communicate an aromatic fragrance to home-made wines, resembling that of the muscatel wines of the south of France.

An infusion of the flowers of the lime (*Tilia europea*), separated from the bracts, is considered to be a sovereign remedy for headache in Switzerland and Germany. The flowers of the *T. argentea*, Desf., have been met with in Europe as a substitute for the flowers of *T. parviflora* and *T. grandifolia*, Ehrh. The flowers of the former species have larger bracts, which are of a greener colour than the officinal, finely reticulated above, and underneath densely covered with stellate hairs, which readily separate when dry, forming a woolly, irritating powder; the flowers have, particularly in the fresh state, an odour reminding of hyacinth and lily of the valley.

An infusion of the flowers of the linden is much used on the Continent, being considered good in vertigo and spasms, and against coughs, for its expectorant properties.

In North America *Calycanthus lævigatus* and *C. floridus* are much prized for their highly-scented, inconspicuous flowers, which are often gathered and put into clothes drawers to impart their perfume.

Evodia hortensis is a favourite plant in the gardens of the natives of the Pacific Islands, being used for scenting cocoa-nut oil.

The small flowers of *Pandanus odoratissimus* are very fragrant, and from them an oil, known as koora oil, is obtained. The perfume is extracted chiefly from the male flowers. The floral leaves themselves are eaten either raw or boiled.

The flowers of *Nyctanthes arbor tristis* shed a delicious fragrance in gardens, where they grow only during the night. It is at sunset they open, and before the morning the ground is covered with the fallen corollas. The native women collect them in India, and, stringing them on threads, wear them as necklaces, or twine them in their hair. The orange-coloured tubes dye a beautiful buff or orange colour, with the various shades between them, according to the proportion and mode of conducting the operation, but no way has yet been discovered of rendering the colour durable.

In the East the petals of the flowers of *Hibiscus rosa sinensis* are used for blacking shoes, and the women employ them to colour their hair and eyebrows black. They are also eaten by the natives as pickles. The flowers are used to tinge spirituous liquors, and the petals, when rubbed on paper, communicate a bluish purple tint, which forms an excellent substitute for litmus paper as a chemical test. In China they make these large handsome crimson, yellow, and white flowers into garlands and festoons on all occasions of festivity, and even in their sepulchral rites.

The flowers of *Acacia Farnesiana*, known as cassie, distilled, yield a delicious perfume. In Borneo the fragrant flowers of *Areca Catechu* are mixed with medicine for the cure of many diseases.

In China many odoriferous flowers are much used in scenting teas. Ball, in his work on Tea, pp. 162-164, gives a description of some. Among these the following may be enumerated. The best kinds of Caper or Sonchy teas are said to be scented more or less with the curious green flowers of the Chu-Lan (*Chloranthus inconspicuus*, Swartz), although Fortune states those of the *Aglaia odorata*, Lour., are used. These writers agree, however, in the following:—

Pac-sheen, the sweet-scented pale yellow flowers of *Gardenia florida*.

Quy-fa, or Kuey-Noa, the yellow flowers of *Olea fragrans*.

Moe-ly-Hoa, the white flowers of *Jasminum Sambac* and *J. paniculatum*.

For the cowslip-flavoured teas, the pink flowers of *Primula prænitens* are employed. Orange blossoms and many other flowers are believed to be used, but they should always be full blown.

The *Mesua ferrea* is much cultivated in Java and Malabar for the beauty and fragrance of its large white flowers. When dry they are mixed with other aromatics, such as sandul wood, and used for perfuming pomades. The blossoms are found in a dried state in the Indian bazaars, and are called Nagkushur; they are used medicinally and much esteemed for their fragrance, on which latter account the Burmese grandees stuff their pillows with the dried anthers.

The large flowers of *Michelia Champaca* are celebrated for their exquisite perfume, and the tree is highly venerated by the Hindoos. The natives adorn their heads with them, the rich orange colour of the flowers contrasting strongly with their dark black hair. Sir W. Jones states that their fragrance is so strong that bees will seldom, if ever, alight upon them.

Large numbers of the fleshy variegated calyxes of the *Hibiscus Sabdariffa*, are dried and stored in parts of Africa: in this condition they retain their fragrance, and serve for the purpose of giving the soups of the natives an acid flavour almost as sharp as vinegar. The calyx and capsule, freed from the seeds, make excellent tarts and jellies: a decoction of these, sweetened and fermented, is commonly called in the West Indies sorrel drink.

The natives of India are very fond of the flowers and leaves of *Clerodendron serratum*, which they eat as vegetables.

From the flowers or blossoms of the red gum tree (*Eucalyptus rostrata*), the natives of West Australia make a favourite beverage by soaking the flowers in water. The *Banksia* flowers are also so steeped to extract the honey. They are extremely fond of the infusion, and in the season their places of resort may be recognised by the small holes dug in the ground and lined with the bark of the tea tree, and which are surrounded with the drenched remains of the flowers, called by them man-gyt. They sit round this hole, each furnished with a small bunch of pine shavings, which they dip and suck until the beverage is finished.

From the flower of the Budjan shrub (*Dryandria Fraseri*) a nectar or honey is also obtained, much sought after by the natives.

REVIEWS

AND

Literary Notes.

Practical Observations on the Degeneracy and Preservation of the Teeth. By Edwin Cox. Pp. 128. London: Elliot Stock.

A book on this topic can hardly fail to be popular. We do not need the accumulation of proof of dental degeneracy which is here brought forward to assure us that there can hardly be a more interesting subject to a powerful minority of free-born Britons. The author, as a practical and educated dentist, is well qualified to speak. He is a vegetarian and anti-vaccinationist. Perhaps we should modify this statement and say that from this very unpromising ground he brings forward many powerful arguments in favour of a vegetable diet and against vaccination. These arguments lose none of their force by the moderation of the language they are conveyed in, or from the numerous quotations from unprejudiced writers with which they are supported. No one theory of the cause of dental degeneracy is here brought to the fore to the exclusion of all others. The author has his opinion, and maintains it, but at the same time he sufficiently acknowledges the existence of other writers and opinions to show his readers that his is but one opinion among many.

The root cause of dental degeneracy may be summed up in the word civilisation. The author insists, and not one wit too strongly or needlessly, on the universal practice of eating too much. Let us ponder the fact that every one of us, almost without exception, habitually eats twice as much as we can want for every possible purpose. The almost insane indifference to everything but the taste of food is also wisely commented on.

The book by its nature and intention does not enunciate striking novel doctrines. It combats prejudices, destroys superstitions, and replaces them with plain, ordinary facts, such as everyone should know. It will help on the education of the masses in an important direction. Although a few of the least important statements may be combated, and exception may be taken in places to the author's style, yet we have perfect confidence in recommending it to those non-professional readers for whom it is intended.

NEW BOOKS.

PUBLISHED SINCE OCTOBER 15.

Art Anatomy. Comprising 486 designs on 81 heliotype plates, illustrating every portion of the human figure, with descriptive text. By W. Rimmer. Folio, half-morocco, gilt. (Boston.) London	252/0
Catalogue des Instruments de Chimie et Physique de A. Fontaine, Ancien Fabricant de Produits Chimiques, Fournisseur des Laboratories des Facultés des Sciences et de Médecine, &c. Ouvrage illustré de 400 Gravures dans le Texte. 8vo.	5/0
Chemistry in the Brewing Room: being the substance of a course of lessons to practical brewers. With tables of alcoholic extract and original gravity. By C. H. Piesse. 12mo., pp. 68. Trübner	5/0
Combined Handbook and Notebook for Students of Organic Chemistry preparing for the Examinations of the Science and Art Department (Elementary and Advanced), Oxford and Cambridge Local and London University. By J. Monckman. 12mo., pp. 56. (Leeds: Bean.) Simpkin	1/0
Comparative Zoology, Structural and Systematic, for use in schools and colleges. Illustrated. By J. Orton. Crown 8vo. (New York.) London	15/0
Ziemssen's Cyclopædia of Medicine. Translated under the superintendence of or edited by A. H. Buck. Royal 8vo., pp. 724 (17 vols., not sold separately). Low	357/0
Davois Platz: A new Swiss Retreat for Invalids and Tourists. By one who knows it well. 32mo., pp. 40, sewed. Sweeting ..	/6
Eléments de Médecine Pratique, contenant le Traitement Homœopathique de Chaque Maladie. By Jousset. 8vo.	15/
Elements of Dental Materia Medica and Therapeutics. With Pharmacopœia. By J. Stocken. 12mo., pp. 144. Churchill	3/6
Elements of Pharmacy, designed as a Textbook for Students preparing for the Pharmaceutical Minor Examination. By G. S. V. Wills. Post 8vo., pp. 116. Westminster College of Chemistry ..	6/6
Floræ Dalmaticæ Supplementum Alterum. By R. de Visiani. 4to.	14/

Grundriss der Physiologie d. Menschen f. Studirende u. Aerzte. By J. Steiner. 8vo.	10,6
Hospitals: their History, Organisation, and Construction. By W. G. Wylie. (Boylston Prize Essay of Harvard University for 1876.) 16mo. (New York.) London	12/6
Leçons de Clinique Médicale Professées à l'Hôpital Homœopathique Saint-Jacques, 1875-77. By Jousset. 8vo.	7/6
Lectures on Clinical Medicine, delivered in the Royal and Western Infirmaries of Glasgow. With Illustrations. By M'Coll Anderson. 8vo., pp. 266. Macmillan	10/6
Manual of Decimals, the Metric System, and Physics. By G. S. V. Wills. 12mo., pp. 50. Westminster College..	1/
Manual for Medical Officers of the Militia of the United States. By E. J. Forster. 16mo. (New York.) London	10/6
Manual of Vegetable Materia Medica, with 105 coloured Illustrations. By G. S. V. Wills. 2nd edit., post 8vo., pp. 144. Simpkin ..	8/6
Physician's Visiting List and Vade-Mecum. Edited by H. C. Wood. 12mo., morocco tuck. (Philadelphia.) London	7 6
Practical Gynæcology: a Handbook of the Diseases of Women. By H. Smith. Post 8vo., pp. 202. Churchill	5/6
Practical Manual of Analysis for the use of Schools, Private Teachers, and Students. By H. T. Foster. 12mo., pp. 46, sewed. (Lincoln: Ackrill.) Simpkin	/9
Shall I Study Medicine? In some parts a Réchauffé from Smiles and other Authors. By F. D. Handyside. 12mo., pp. 32, sewed. (Edinburgh: Oliver & Boyd.) Simpkin	1/0
Sound, and the Physical Basis of Music. By J. Cook. 12mo., pp. 112 (Science Manuals). Chambers..	1/0
On Spontaneous Generation and the Doctrine of Contagium Vivum: An Address at the Medical Association, Manchester, August, 1877. By W. Roberts. Smith & Elder	2/0
Surgical Jurisprudence. With Chapters on Skill in Diagnosis and Treatment, Prognosis in Fractures, and on Negligence. By M. A. McClelland. 8vo., sheep. (New York.) London	21/0
Thermodynamics. By R. Wormell. 18mo., pp. 176. Longmans ..	1/6
Tonic Treatment of Syphilis. By E. L. Keyes. 8vo. (New York.) London	5/0
Traité Pratique des Maladies de l'Appareil Génital de la Femme. avec une Notice sur la Stérilité et le moyen d'y Remédier par la Fécondation Artificielle. By Gérard. 18mo.	5/0
Treatise on Perfumery. With an Appendix, giving Directions for making Domestic Wines, Cordials, Liquors, Candies, &c. By R. S. Cristiani. 8vo. (Philadelphia.) London	25/0

Correspondence

THE BRITISH HOMŒOPATHIC CONGRESS.

TO THE EDITOR OF "THE CHEMIST AND DRUGGIST."

SIR,—In referring to the address I recently delivered at the Homœopathic Congress at Liverpool, you have so obviously misinterpreted its purport and so entirely mistaken the position of physicians who practise homœopathy, that I trust you will allow me a brief space for a reply.

I certainly did not exhibit in detail the severe persecutions which homœopathic practitioners have endured. What I did was to present a sketch of the manner in which homœopathy has been received by the great mass of the profession. I endeavoured to show that every effort had been made to introduce it to the profession through the usual professional chemists; that these efforts had one and all failed; that this failure had arisen not from any intolerance on the part of homœopathists, not from any unprofessional conduct which would be alleged against them, but solely because the profession had, through its organs in the press, determined not to learn anything regarding it from those who had studied and tested it. My doing so had been rendered necessary by the interpretation which nearly every reader of Dr. Wyld's letter to Dr. Richardson had placed upon the language he used in it. Had my object been to recount the various persecutions homœopathists have suffered in times past, quite another class of illustrations would have been drawn upon, one far too large for the credit of the medical profession. Now-a-days, it is true, it would be difficult for a Middlesex coroner to persuade a jury to authorise his committal of a medical student to Newgate on a charge of manslaughter because he, having treated his brother homœopathically during an attack of Asiatic cholera, failed to cure him. This, however, Mr. Wakeley, junior, did less than thirty years ago. Of persecution such as this, and indeed of the more frequent petty annoyances to which homœopathists have been exposed, we gladly acknowledge that we meet with little or nothing now-a-days. It is not of a personal matter that I spoke at Liverpool, but of the injury done to medical science by the suppression of inquiry into homœopathy as a therapeutic method of drug selection; of the damage done to the *morale* of the profession by compelling men who occupy good appointments to employ those means which they know to be best for their patients in a covert and unexplained manner—to practise empirically rather than scientifically.

I deny entirely that there is anything reasonable in excluding a man from a medical society on the ground of his holding opinions which are at present entertained only by a minority. There is no analogy whatever between the members of the Liberation Society and the Church Congress on the one hand and homœopaths and non-homœopaths on the other. In religion a standard of orthodoxy has been set up; in medicine there is none. In ecclesiastical matters there are statutes of the realm under which they are conducted; there are none in therapeutics, either of the realm or of the College of Physicians, compelling adhesion to certain doctrines.

What renders, or appears to me to render, the exclusion of homœopathic physicians from hospitals and societies so unjustifiable is that at this moment there are physicians practising homœopathy in the wards of our London hospitals in a *sub rosa*, secret, and empirical manner. They dare not do otherwise. Not to practise homœopathy would, they know, be to weaken their power to do good; to acknowledge the *rationale* of their prescription would be to incur a risk of having to sacrifice their appointments. To give ipecacuanha in vomiting or aconite in fever may be so far unobjectionable to the powers that be, but to give the only known interpretation of the action of either drug in these conditions is fatal to professional advancement. Against this kind of action it was that I took occasion to protest at Liverpool. The solution, the only solution of all the difficulties with which the inquiry into homœopathy has been fenced around, is in the admission of the truth and justice of Professor Gardner's declaration that no member of the profession has a right to say to another, "I insist that you believe so and so, or I will disown you as a professional brother."

With reference to the London School of Homœopathy, I think that any candid person will admit that with all the influence brought to bear upon students to prevent them attending the school, coupled with the lukewarm and, it is to be feared, secret opposition of some of its supposed friends, the fact that 14 or 15 students entered during its first session, and that a summer session, was really very gratifying. The result exceeded my anticipations. To have designated the school a School of Medicine would have been to have given to it a name to which, by its limitation to the teaching of therapeutics and practical medicine, it is not entitled. The designation it has is one which expresses the work done at it in plain intelligible language, and it is therefore the best that it can have.

It is no opposition school, but simply one where students may learn that which they cannot learn elsewhere.

I am sir, yours, &c.,
ALFRED C. POPE.

2 Finsbury Circus, October 18, 1877.

THE "PHARMACEUTICAL JOURNAL" ON TEMPERANCE.

TO THE EDITOR OF "THE CHEMIST AND DRUGGIST."

SIR,—The Pharmaceutical Society has, I believe, always been regarded by the country trade as a tolerably harmless, though not a very useful, association. Its council have the credit of having made a really good use of the funds placed at their disposal for the relief of need; but, beyond this, their value to the community has, to say the least of it, not been very apparent.

A school is maintained, at no small expense, which is doubtless, a formidable competitor with the private adventures of Messrs. Muter, Wills, and other teachers of science. A weekly journal is published, which, thanks to the courtesy of the Society of Arts and of some of the eminent men who deliver Cantor and other lectures, occasionally contains an exceedingly interesting and instructive paper; and the interests of the trade (outside the charmed circle of about a dozen wealthy firms) obtain just as much attention as is absolutely forced upon the council by a recently established rival association.

Well, all this may be regarded as a masterly inactivity of which an individual member ought not to complain, if the majority of his fellow-subscribers are satisfied. But "a change has come o'er the spirit of our dream." The council has gone in for balls and dinners, and its members appear to have "charged their glasses"[*] to some effect.

In what way Dr. Richardson has incurred the ire of the masters and servants at 17 Bloomsbury Square I know not; but it is singularly unfortunate for the trade that the council have timed their attack on a distinguished member of the medical profession at a moment when some of the more ardent of the Protectionist spirits among the surgeons and apothecaries are attacking what many among us regard as our rights. The matter is all the more important to the trade at large because the pitiable exhibition emanates from a source which has always represented itself to the public as the educated party among English chemists and druggists.

That responsibility for the impropriety rests on the council of the Pharmaceutical Society as a body, and not on a mere private individual in a moment of weakness, is fairly deducible from the fact that the following letters (which were posted together on the day of their date) have failed to elicit any expression of disapproval.

To the Council of the Pharmaceutical Society, &c.,

Northleach, Gloucestershire,
October 1, 1877.

GENTLEMEN,—I desire to call your attention to an article on "The Science of Temperance," on pp. 247, 248 of the society's journal, and to express an earnest hope that you will be able to take steps which will secure our pages from any similar stain in the future.

It is comparatively a small matter that the article as a whole, made up as it is of false logic and unsupported assertions, would seem less out of place in a "Liquor Trades' Advocate" than in the journal of a society such as we wish ours to be; but it is surely unfitting that our property should be used as a medium for a rude personal attack on a distinguished, enthusiastic, and indefatigable worker in the field of science.

I am not desirous to put myself forward as a defender of all or any of Dr. Richardson's deductions from his observations and experiments; but I am very desirous that our journal shall be kept free from any such defilement as that to which I now ask your attention.

I am, gentlemen, your obedient servant,
JAMES H. H. HOWARD.

To Mr. E. Bremridge, Secretary, &c.

Northleach, Gloucestershire,
October 1, 1877.

DEAR SIR,—Be so kind as to submit the accompanying letter to the council at their next meeting, and oblige,

Your obedient servant,
JAMES H. H. HOWARD.

For the sake of such of your readers as, through want of time or opportunity, have cultivated logical faculties as little as have the writers of the article complained of, I will add an exposure of the blunder which is paraded as a gem by certain *soi-disant* admirers of the great German chemist:—

> In a certain household (says Liebig), it was observed that from the day on which the servants ceased to receive beer from their master the consumption of bread increased in a ratio corresponding to the diminution of beer, so that the beer was paid for twice—once in money, and the second time in the form of an equivalent of another kind of food yielding the same amount of carbon and hydrogen."[†]

I will not question the correctness of the observation that when the beer was discontinued more bread was eaten. The withdrawal of a daily allowance of some other things would, no doubt, have been followed by a similar increase. That is no proof that the article withdrawn is a food. Test it thus:—For "beer," throughout the above quotation substitute "tartarised antimony." The proof, if there be one, is as strong in the one case as in the other!

I am, sir, your obedient servant,
Northleach, Gloucestershire, Oct. 12, 1877. JAMES H. H. HOWARD.

CANINE TOXICOLOGY.

TO THE EDITOR OF "THE CHEMIST AND DRUGGIST."

SIR,—Under the heading of "Canine Toxicology," some of your correspondents have thrown out some valuable suggestions as to the most merciful manner of destroying dogs.

As it frequently happens that the poor brute has been a faithful, and often a useful, companion to its owner, when from age or disease he feels compelled to destroy it, it is very natural that the manner of killing it with the least degree of pain should be a matter of concern to the person whose business it is to administer the *coup de grâce*.

My experience with prussic acid, strychnine, &c., is much the same as that of your other correspondents. Being successful with the former poison upon small dogs, I entertained the popular belief that nothing could supersede it; but being called upon once to destroy a large retriever, I found to my dismay that after two doses of one drachm each, shot down the throat by means of a glass (male) syringe, death did not take place so quickly as I was wont to see it in other cases. I have no doubt that the dog would have lingered some time had not the owner despatched him with several blows upon the head from a large mallet, and even during this operation the poor brute looked wistfully at his master, wagging his tail at the same time.

With reference to the plan suggested by one correspondent, that, when practicable, it is best to drown dogs, it frequently happens in the struggle for life they manage to swim back to *terra firma*, with the load intended to submerge them still suspended from their necks; and often do you see the cruel executioners either batter the heads of the wretched animals with sticks or brickbats, or hurl their victims back to the water, again to struggle with their more merciful enemy.

Another plan is to securely (as one imagines) tie the legs of the animal before committing it to the water, but often then in the struggle which follows it manages to disentangle the cords which bind it, and the poor wretch reaches the bank, and arriving at the side of its master wags his tail in token of friendship.

I regard firearms with much distrust, but think the "ounce of lead" much better than the uncertainty of poisons or a clumsy attempt to drown.

"Give a dog a bad name and hang him" is a proverb from which, like most others, much may be learned. Hanging has doubtless been selected as the capital punishment on account of its being considered the most merciful mode of execution; if so, why not adopt it for the canine species?

My father, who is a breeder of sporting and other dogs, invariably follows this plan when compelled to part with an "old favourite."

I recollect once a large tom cat took a great fancy to his prize "Antwerps," and venturing too near the pen, was caught one night in a cord set for "such small deer," was hanged by it, and that very quickly. All will allow it to be a very difficult thing to dispose of a cat.

I am sorry to trespass upon your space, but if I can save one unnecessary pang to any unfortunate canine friend, I shall feel well paid. Yours respectfully,
West Bromwich. DUDLEY GILL.

A PHARMACEUTICAL ORPHAN ASYLUM.

TO THE EDITOR OF "THE CHEMIST AND DRUGGIST."

SIR,—Having noticed a discussion in the council of the Pharmaceutical on the question of a grant of 50*l*. for the admission of a child into an orphanage, it occurs to me that it is a suitable time to call attention to the question of schools for the orphans and children of necessitous chemists and druggists. Although a member of the Pharmaceutical from the time we met and took coffee at the late Jacob Bell's, I am a commercial traveller, and think our schools at Pinner do the body great credit. Surely a small subscription could be got up to form a nucleus for such an object. There are many orphanages, notably the Wanstead, but none exclusively for chemists and druggists. My only child is provided for by a grave, therefore I am thoroughly disinterested.

I am, yours truly,
November 3, 1877. A COMMERCIAL TRAVELLER.

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[*] *Pharmaceutical Journal*, p. 248.

[†] *Pharmaceutical Journal*, p. 247.

ILLICIT PHARMACY.

TO THE EDITOR OF "THE CHEMIST AND DRUGGIST."

Sir,—In your last issue I noticed a letter from Mr. Haydon, secretary to the Chemists' and Druggists' Trade Association, and I should like to say a few words in support of his statement. I am at present managing a business in a village in Notts, of 2,000 or 3,000 population, where, besides myself, there is one registered (*sic*) chemist and druggist (a collier selling drugs at the time of passing the Pharmacy Act), and I have had proof of no less than four illegal traders in poisons within 400 yards. I reported these to the Registrar of the Pharmaceutical Society, who sent the usual cautionary letter, with the result that three of them still sell, I know, but only to persons they know to be customers. Two of these can boast a heavy trade in laudanum, as well as other drugs.

I certainly think it a great pity we cannot take action ourselves under section 15 of the Act, as it takes such an enormous power to move the Pharmaceutical Society's council in the matter.

I am, sir, yours respectfully,
J. P. R.

SOMETHING TO BE PROUD OF.

TO THE EDITOR OF "THE CHEMIST AND DRUGGIST."

Sir,—Allow me to correct a slight error in your account of the voting at the annual meeting of the Pharmaceutical Society of Ireland—*vide* Chemist and Druggist, p. 377. You therein state that the number of votes recorded for me was 69. As a matter of fact, the number was 71. It is not of much importance, but as there were 71 voting papers sent in, it might give an impression to some of your Irish readers that two members of the society voted against me, whilst my re-election was unanimous.

I remain, sir, yours truly,
Dublin: October 17, 1877. C. R. C. Tichborne.

[Most of us could submit to only two enemies with equanimity; but Professor Tichborne is to be congratulated on not having even this small proportion. But harmony and peace have always been Ireland's characteristics!—Ed. C. & D.]

THE CHEMICAL SOCIETY.

Thursday, November 1, 1877.

Dr. Gladstone in the chair.

The following papers were read:—

"On some Hydrocarbons obtained from the Homologues of Cinnamic Acid," by W. H. Perkin. These hydrocarbons were prepared either by heating the acids, or by treating the hydrobromo acids with bases. The following acids were prepared and examined:—Hydrobromocinnenylacrylic, hydrobromocinnenyl crotonic, hydrobromocinnenylangelic. The following hydrocarbons were obtained:—Isopropylvinylbenzene, isopropylallylbenzene, isopropylbutenylbenzene, allylbenzene, and butenylbenzene; the dibromides of these bodies were also prepared and examined.

"On Anethol and its Homologues," by W. H. Perkin. By treating methylparoxyphenylacrylic acid vinylic anethol was obtained; similarly allylic, or ordinary anethol, and butenylic anethol were prepared. In conclusion the author discussed the formation of the hydrocarbons from the hydrobromo acids, and concludes that they are formed simply by the separation of hydrobromic acid and carbonic anhydride.

"On Two New Methods for estimating Bismuth Volumetrically," by M. M. P. Muir. To a solution of bismuth in nitric acid an excess of sodium acetate is added, and then a measured volume of standard sodium phosphate solution, also in excess: the bismuth is precipitated, the precipitate filtered off, and the excess of phosphoric acid determined in the filtrate by uranium acetate. Another method given does not yield such accurate results.

"On the Oxidation of Ditolyl," by T. Carnelly. By the oxidation of solid ditolyl the author obtained diparatolylphenylcarbonic acid and diparadiphenyldicarbonic acid: liquid ditolyl yielded orthoparatolylphenylcarbonic acid, orthoparadiphenylcarbonic acid, and, finally, terephthallic acid.

"On a New Manganese Reaction," by J. B. Hannay. If a solution of a manganous salt in strong nitric acid is warmed in the presence of an iron salt with some crystals of potassic chlorate, the iron and manganese are precipitated as a double manganate of iron and manganese. The author proposes this reaction for separating iron from aluminium, &c.

The society adjourned till November 15, when the following papers will be read:—

"On Gallium," by Professor Odling.

First report to the Chemical Society "On Some Points in Chemical Dynamics," by Dr. Wright and Mr. Luff.

"On the Influence Exerted by Time or Mass in Certain Reactions in which Insoluble Salts are Produced," by M. M. P. Muir.

"On Two New Fatty Acids of the Series $C_nH_{2n}O_2$," by C. T. Kingzett and Dr. B. H. Paul.

LEGAL & MAGISTERIAL.

Naphtha on the Premises.

At the Nottingham Police Court, on October 16, Mr. Benjamin North, a wholesale druggist, was summoned for having a large quantity of naphtha upon his unlicensed premises in St. James Street. The prosecution was conducted by the Town Clerk, and it appeared that on Thursday week the petroleum inspector visited some premises occupied by the defendant, and in the yard he found a dray containing several casks. These casks contained about 120 gallons of naphtha, and it was stated that the premises upon which it was found were not licensed for the purpose. The defendant had been fined twice before for similar offences. In defence evidence was called to show that the naphtha was only put into the yard temporarily, previous to being sent, some to customers, and the rest to licensed stores. A fine of 20*l.* was inflicted, and the naphtha forfeited.

Diluted Spirit of Nitre.

At Sheffield, on October 12, before H. Unwin and H. Stephenson, Esqs., Wm. Watson, chemist and druggist, of the Wicker, was summoned for unlawfully selling 4 ozs. of spirits of nitrous ether, not of the nature, substance, and quality of the article demanded by the purchaser.

The Town Clerk prosecuted on behalf of Dr. Griffiths, medical officer of health.

Inspector Brammer proved that on the 4th ult. he purchased 4 ozs. of spirits of nitrous ether from the defendant, and left the article with the borough analyst, who had made the following certificate:—"The sample had a specific gravity of ·9127, which corresponds to a dilution of 100 volumes of spirits of nitrous ether or sweet spirits of nitre of good quality with about 44 volumes of water. In addition to being diluted with water, the sample contained only a minute trace of real nitrous ether, which is present in considerable proportion in spirits of nitrous ether and sweet spirit of nitre of good quality, and which is the most important constituent."

Mr. Allen (the borough analyst), in his evidence, said that the drug was useless for the purpose for which it was sold. The virtue was gone, and anyone buying it as a medicinal drug—and it was a popular remedy—would be grossly deceived.

The defendant said that he bought the drug from a firm in York, where he had traded for 25 years. He sold it just as he received it, without adding any water.

The Bench said they were bound to protect the public, and imposed a fine of 5*l.*

Aërated Water Stoppers.

At the Court of Queen's Bench, on the 7th inst., before Mr. Justice Field and a special jury, a slander case between the patentees of some of the new self-stopping bottles for aërated waters was opened. The plaintiff was Mr. Horner, of the firm of Horner & Barker, Chorlton-on-Medlock, near Manchester; the defendant was Mr. Codd, of Camberwell.

The system adopted by both parties is to license traders throughout the country to use their respective patents. It was alleged on the part of the plaintiff that the defendant had gone to several of the plaintiff's licensees and warned them not to deal in the bottles, the subject of the license, for that, by doing so, they would be infringing his (the defendant's) patent. It was further stated that on those occasions he had used very strong language of the plaintiff, imputing to him fraud and insolvency. Plaintiff estimated his damages at 5,000*l.*

The case was resumed on November 8, when a consultation took place between the counsel engaged, and it was ultimately agreed that a verdict should be entered for the plaintiff, with 100*l.* damages; that the defendant should withdraw all imputations; and that the defendant should not interfere with the plaintiff's dealings with the bottle which was the subject of his (the plaintiff's) patent.

Mr. Digby Seymour, Q.C., Mr. Macrory, and Mr. H. Clark appeared for the plaintiff; Sir Henry James, Q.C., Mr. Aston, Q.C., and Mr. Castle for the defendant.

What is Soda Water?

At Selby Police Court on November 12, John Thomas Cutting, chemist and druggist, of that town, was charged with selling as soda water a mixture not containing more than seven grains to the pint. Mr. H. Glaisyer, of Birmingham (instructed by the Chemists and Druggists' Association of Birmingham), defended. It was sought to be shown that, according to the British Pharmacopœia, soda-water should contain thirty grains of soda to the pint; but for the defence it was contended that the soda-water of popular use was a different article to that which was used for purely medical purposes. The defendant kept both preparations. Dr. Attfield was called as a witness for the defendant, and the case was dismissed.—In another case a person named Taylor, who sold soda-water which contained no soda, was fined 2*s.* 6*d.* and costs.

Alleged Adulteration of Quinine—Failure of the Prosecution.

Mr. John Davies, chemist and druggist, living at Pontypridd, received on June 11 a visit from the superintendent of police, Mr. Matthews. Mr. Davies was asked to supply him with half a dram of sulphate of quinine, and half an ounce of calomel. After the goods were supplied, the superintendent informed the vendor that the drugs had been purchased for the purpose of analysis, and that he intended to send one-third of the quantity to the county analyst. He also offered to leave one-third part with Mr. Davies. The case was tried on October 31. Mr. W. H. Morgan appeared for Mr. Davies.

The Superintendent added to his evidence that he offered to divide the purchase into three parts, and to leave one-third with the vendor, who declined, on the ground that he had enough of the same sort. He wished to put his own label on the samples, and did so, putting "quinine" on one packet and "calomel" on the other.

He (the superintendent) delivered both samples to Mr. Scott, the county analyst—all that he had purchased. He produced two certificates. Quinine was worth from 13*s.* to 17*s.* per oz. Cinchonine from 1*s.* 4*d.* to 1*s.* 10*d.* per oz.

Mr. Davies, on being sworn, said: I am a chemist at Pontypridd. I recollect Mr. Matthews purchasing some quinine of me. I gave it to him out of a bottle, the one produced. I bought it of Langton, Harker & Stagg, London. It is labelled "Sulphate of quinine, prepared by Howard & Sons (late Howard & Kent), Stratford, London." I sold it in precisely the same state as I received it. I never had any cinchonine in my possession. I never mixed anything with the quinine I received from Howard & Sons. The calomel was also sold by me in exactly the same state as I received it in the bottle produced. He (Mr. Davies) stated that, with reference to the calomel, he sold it as he bought it. The perchloride of mercury would be about the same price, and 16 times the strength, so that there would be no advantage or profit in mixing or adulterating it. He had, however, not sold all the contents of the bottle from which the sample sold to Mr. Matthews had been taken. He had forwarded samples to Professor Attfield, London, and Mr. Thomas, the borough analyst, Cardiff, and both certified that the samples were pure.

The bench believed that Mr. Davies had not had cinchonine in his possession, so that he could not have mixed it with the quinine; and, further, they were of opinion that a respectable tradesman like Mr. Davies would not be likely to jeopardise his position and prospects by committing the offence with which he was charged. They, therefore, dismissed the case.

Burglary at a Chemist's.

It appears that being a member of the Executive Committee of the Chemists' and Druggists' Trade Association does not exempt from the privileges of having one's premises burglariously entered. One night last month the police noticed a light in the shop of Mr. Frederick Andrews, of 34 Leinster Terrace, Paddington, which is also the post office. When the house was surrounded and the bell rung, the light disappeared, and the constable in the rear of the house soon had the pleasure of seeing two persons walking toward him. A chase ensued, and Mr. Henry Howard, a betting man, without fixed residence, was captured. In his pockets were found gold, silver and other currency to the amount of 31*l.* 0*s.* 10¾*d.* His companion escaped, carrying with him stamps and cash, raising the value of the booty to 49*l.* 5*s.* 4*d.* The prisoner claimed 7*l.* 4*s.* 8*d.* as his own property. After a remand he was fully committed for trial at the Central Criminal Court.

BANKRUPTCIES AND LIQUIDATIONS.

A. Aaronson, Dentist, 31 Gracechurch Street and Whitechapel Road.

The debtor, Andrew Aaronson, had filed a petition for liquidation, and at the meeting of his creditors a statement of affairs was presented showing debts to the amount of 1,099*l.* 6*s.*, and assets 139*l.* 16*s.* 6*d.* The creditors included the following:—

	£	*s.*	*d.*
S. Lutto, 78A Whitechapel Road	350	0	0
M. Latte, 16 Chapel Street	165	0	0
R. Tuck, 117 City Road	150	0	0
M. Bentinck, 87 Englefield Road	127	0	0
Dental Company (Limited), Broad Street, W. . ..	30	0	0
G. Rutherford, 10 Poland Street, W.	23	0	0

It was resolved that the estate should be liquidated by arrangement, with Mr. F. Quartly, accountant, 30 Budge Row, as trustee; and on October 23 Mr. Bigham applied for registration of the resolutions. Mr. E. C. Willis, for a creditor, opposed, mainly upon the ground that after payment of the costs there would be no property available for distribution. Mr. Bigham, in reply, said that although the assets were but small, the debtor's future property was still liable, as the creditors had not granted him his discharge. It was obviously a case in which the debtor, being unable to meet his engagements, was entitled to such relief as the law afforded. Mr. Registrar Hazlitt, however, came to the conclusion that there was practically no estate to be administered, and therefore declined to register the resolutions.

Henry Brandreth.

A meeting of creditors under the failure of Mr. Henry Brandreth, the agent in this country for the sale of Alcock's Porous Plasters, was held last month at the Law Association Rooms, Liverpool. A large number of creditors were present, and several solicitors attended on behalf of their respective clients. Mr. Chalmers, the receiver, produced a statement of accounts, showing unsecured debts, 29,264*l.*; those secured, 21,992*l.*; and debts to be paid in full, 322*l.* The assets consist of book debts, 355*l.*, estimated to produce 183*l.*; cash, 10*l.*; household furniture, 2,894*l.*; and dogs and puppies, 270*l.* The principal creditors are the Excelsior Medical College, New York, 20,827*l.*, the bulk of this sum being for the exclusive right of sale in England of Alcock's Plasters, which were to be supplied to him at 2*l.* 4*s.* 4*d.* a gross. The other debts were principally for advertising, Messrs. W. H. Smith & Co. being creditors for 1,100*l.*; Mr. Clarke, advertising agent, London, 1,245*l.*; and Messrs. Cassell & Co., 540*l.* Mr. Urquhart, of Bold Street, was appointed chairman, and after the statement of accounts had been read and the debtor examined shortly, it was proposed by Mr. Collins, on his behalf, that a composition of 5*s.* in the pound, payable in a month after the registration of the creditors' resolutions, be accepted, and that offer, after some discussion, was unanimously accepted, the debtor, however, to secure the same by an assignment of his estate to Mr. Chalmers, who was appointed trustee for that purpose.

ANSON EDWIN MARTIN (TRADING AS MORRIS & CO.).

THE debtor, described as a chemist and druggist, of 136 Broad Street, Birmingham, filed his petition for liquidation, with liabilities estimated at 800*l.*, and assets 350*l.* or thereabouts. J. M. Garland (Barber & Garland), public accountant, has been appointed receiver of the estate.

FRANK WHITWORTH.

THE debtor, described as a chemist, of 33 Pigott Street, Birmingham, has filed his petition for liquidation, with liabilities estimated at 700*l.*

ALFRED R. WILLSON, Chemist, 368 Clapham Road.

THE debtor has presented a petition for liquidation, returning his debts at 421*l.* 18*s.*, and assets about 176*l.*, consisting of stock, fixtures, fittings, furniture, and book debts. The case came before the Court on October 25, upon an application for the appointment of a receiver and an interim injunction restraining proceedings by creditors. Mr. Wilde, in supporting the application, read an affidavit of the debtor, showing that a creditor named Charlotte Lane had recovered judgment against him for 73*l.* 8*s.* 9*d.*, and that an execution had been issued at the suit of Edward James Wright for recovery of a sum of 25*l.* Mr. E. A. Lewes, of 3 Campden Hill Terrace, was nominated to the office of receiver. Mr. Registrar Brougham said that he would make the appointment upon the production of a proper affidavit of fitness, but he could only restrain the action at the suit of Charlotte Lane, the Court having no power to interfere as to the other action, in which execution had been issued for a sum under 50*l.* before the filing of the petition.

The following are the principal creditors:—

	£	*s.*	*d.*
Thomas Baker, 322 Campden Road, W.	131	5	0
E. A. Lewes, 3 Campden Hill Terrace, W.	120	0	0
Charlotte Lane, 23 Endsleigh Street	73	8	9
Hodgkinson, Preston & King, Leadenhall Street ..	36	0	0
E. J. Wright, High Street, Clapham Road	12	0	0

Pharmaceutical Notes.

SYRUP OF THE LACTOPHOSPHATES.

THE rage for elegant pharmacy is evidently increasing, if one may judge from the multiplication of a certain class of formulæ, published and therefore known, as well as of another class, partaking more or less of the proprietary character, the composition of which can therefore only be guessed at.

It would be difficult, for example, to enumerate all the attempts —good, bad and indifferent—made to follow in the wake, say of Parrish's syrup. Fortunately, however, it is unnecessary to do so, from the simple fact that in the majority of instances they have broken down almost immediately they were formulated. Without entering into the ethics of the matter, we would call attention to one or two peculiarities attending the preparation of probably the latest of these introductions into pharmacy, and which promises at the present time to be somewhat permanent as regards popularity—namely, the syrups of the lactophosphates. From the fact that no two of the published receipts for these syrups agree either in strength or composition, we may conclude that some little difficulty has been experienced in producing a good working formula for their preparation. Practically this has been more than confirmed in the endeavour which we lately made to produce a syrup from the different formulæ respectively, which would be at once both elegant in appearance and therapeutically of value. Failing, however, in every attempt thus to follow in the lines of those who had preceded us, we next endeavoured to shape out one for ourselves, and the following suggestions, as the outcome of the experiments, may therefore prove of value to some. Beginning with the lactophosphate of iron, and assuming that no syrup which contained less of iron than the Pharmacopœia phosphate syrup would be generally acceptable, we found that for each 100 grains of freshly precipitated phosphate of iron at least one fluid ounce concentrated lactic acid (1·215) was required to effect solution. In these proportions the solution produced was at first perfect, but, allowed to stand for a time, a white precipitate shortly began to fall, which gradually increased until obtained in considerable abundance. This precipitate being filtered out, the solution, on the addition of the sugar and a little concentrated orange flower water to flavour in the usual manner, afterwards produced a beautiful permanent syrup, but, needless to say, containing an unknown quantity of lactophosphate of iron. Adding, on the other hand, the sugar to the solution previous to the formation of this precipitate, a clear syrup was obtained, permanent only for a short though varying period, but always assuming in the end a muddy, greenish-black appearance, which rendered it quite unfit for use. Treating next both precipitates with further additions of lactic acid, they proved to be thoroughly incorrigible, for even when in large excess the acid had little or no effect in dissolving either. One further plan seemed still open for adoption, namely, to add excess of acid previous to the formation of the precipitate. Proverbially, prevention is better than cure, and this holds especially good of chemistry, where, as most know, it is frequently more easy to form than to get rid of a precipitate. In this case, however, even large excess of acid did not quite prevent the formation, though it considerably retarded the appearance of the precipitate. Moreover the excess of acid was objectionable, not only from being unpalatable, but also because it effectually prevented the addition of any other acid, as recommended in some receipts, apparently for the very purpose (though not so expressed) of preventing the formation of this same precipitate. In short, not to be unnecessarily tedious, lactic acid of itself was found to be insufficient to effect permanent solution of the phosphate of iron, and therefore it was found necessary to cast about for some additional solvent, or rather some adjunct to act along with it in preventing the formation of this precipitate. After various experiments the addition of a little phosphoric acid was found to answer the purpose admirably, whilst it in no way detracted from the eligibility of the preparation in any respect. When added in slight excess the phosphoric acid not only kept the solution permanently clear, but even after the precipitate had formed either in the simple solution or in the syrup it immediately redissolved it without interfering with its taste, appearance, or therapeutic qualities. The only difficulty experienced is in suggesting the proper amount of phosphoric acid to be added, as the precipitate will be found to vary in quantity according to the care with which the phosphate of iron has been prepared, and probably also from other causes not easily explainable. This we got over by allowing the precipitate freely to form, and then redissolving it by the addition of the syrupy phosphoric acid, drop by drop. All excess of acid is thus avoided, and a syrup obtained at once therapeutically correct and pleasing to the sight and taste. In the case of the lactophosphate of lime syrup less difficulty was experienced, as a permanent solution could easily be obtained containing two grains phosphate of lime in each fluid drachm. For this strength the proportions were, for each 200 grains freshly precipitated phosphate of lime, one fluid ounce concentrated lactic acid. If a stronger solution than this was attempted, immediately it was converted into a syrup it exhibited the extraordinary property of gelatinisation, the whole syrup becoming a thick transparent mass. This was the only difficulty (a somewhat remarkable one) so far as the lime syrup was concerned, and it was easily overcome by limiting the strength of the syrup to the above standard, or where it gelatinized even at this strength, as it sometimes did, by reducing the density of the syrup.

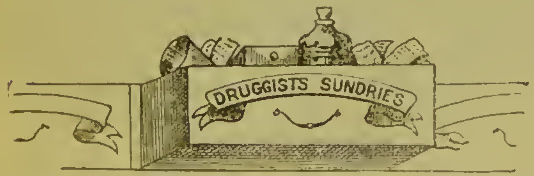
NOTE ON SYRUPS.

IN making the foregoing as well as other syrups it is often necessary to know the given quantity by measure, as well as the density which a known weight of sugar converted into syrup will produce.

In the case of simple syrup the following table will prove useful, not only as affording a ready reference for the syrup in particular, but as affording also the basis whereby others may be calculated. The table will fully explain itself:—

Ozs.		Ozs. water yields	Fluid ozs.	Density.
16	sugar to	12	22½	1·273
16	,,	10	20⅓	1·298
16	,,	8	18½	1·330
14	,,	8	17⅓	1·311
12	,,	8	16	1·290
10	,,	8	14½	1·264
8	,,	8	13¼	1·231

The Pharmacopœia phosphate of iron syrup, for example, has frequently presented a difficulty to many, in respect that the density is not expressed on the one hand, whilst the given proportions of sugar and dilute phosphoric acid on the other hand do not make up the given measure of 12 fluid ounces. In the case of ordinary syrup eight ounces of sugar to five and a-half ounces of water would only yield about ten and a-half fluid ounces, the density of which would be 1·286, or, if it were made up to the necessary 12 ounces by measure, as ordered, this density would be reduced still further, namely, to 1·246. Compare this with the density of other Pharmacopœia syrups, say, for example, the iodide of iron syrup, in which 28 ounces of sugar are ordered to 13 ounces of liquid (being thus fully one-fourth stronger in sugar than the phosphate of iron syrup): the difficulty indicated will probably be more apparent. In thus comparing the different syrups, however, it must not be forgotten that the phosphate of iron syrup has a density considerably greater than would at first appear, from the fact that the density of the phosphoric acid, as well as of the phosphate of iron itself, must be added to the mere syrup density. If a syrup be made according to the Pharmacopœia directions, with eight ounces of sugar to five and a-half ounces dilute phosphoric acid, and made to measure by the addition of water 12 fluid ounces, it will be found to have a density of about 1·285 without the phosphate of iron. With the latter added, the density is raised to about 1·300, and as a matter of fact this density will be found most suitable not only for this syrup but for most others of a similar nature. So far as the lactophosphate of iron syrup is concerned we have generally found commercial samples to range from about 1·295 to 1·310, but the lime syrup was always considerably under this, probably owing to the peculiar tendency to gelatinize already referred to.



Powder for making Ink Disappear.—Take of alum, amber, sulphur, saltpetre, each, in fine powder, one part; mix. This forms an excellent mixture for the removal of ink-spots and writing on paper.—*Polyt. Notiz.*

Sticks of Copper Sulphate.—Four parts of copper sulphate and one part of borax triturated together are said to form a mass that can be rolled into sticks at pleasure for cauterising purposes.—*New Remedies.*

The Bark of Rhamnus Frangula, which has recently been frequently recommended as a reliable cathartic, has been the subject of a curious observation by Dr. Lamm, of Stockholm. Finding that a bark required double or even treble the usual dose, he ascertained that it had been recently collected, and comparing it with a bark known to be three or four years old, obtained much better and prompter results with the latter. The inefficacy of the fresh bark may account for the disuse into which *Rhamnus frangula* has occasionally fallen. Fristedt mentions (1873) that the recent bark produces colic and vomiting, and the last edition of the Norwegian "Pharmacopœia" requires the bark to be kept for one year before it is used medicinally.—*Am. Journ. Pharm., from Zeits. Oesterr. Apoth. Ver.*, 1876, p. 156.

Violet Ink for Rubber Stamps.—A violet ink for rubber stamps is made by mixing and dissolving—aniline violet, 2 to 4 drachms; alcohol, 15 ozs.; glycerine, 15 ozs. The solution is poured on the cushion and rubbed in with a brush.—*Scientific American.*

Freckles.—Take of finely powdered sulphophenate of zinc, one part; oil of lemon, one part; pure alcohol, five parts; collodion, forty-five parts; mix well together by trituration. This has been found efficacious as a local application against freckles, and other slight skin diseases.—*Pharm. Zeit. fur Russ.*

To Clean Paint.—Take 1 oz. pulverised borax, 1 lb. small pieces best brown soap, and 3 quarts water; let simmer till the soap is dissolved, stirring frequently. Do not let it boil. Use with a piece of old flannel, and rinse off as soon as the paint is clean. This mixture is also good for washing clothes.

Mosler's Tape-Worm Bolus (*Boli tænifugi*, Mosler).—Florum cusso, 30 grammes; kamalæ, 15 grammes; ext. filicis liquidum, 4 grammes; mellis, q. s. Mix and divide into 60 boluses, which may be sprinkled over with powdered cinnamon, and of which 30 should be taken in the evening, and 10 or 20 more the following morning.—*New Remedies.*

Hot-water Proof Cement.—The following is a valuable cement, which if properly applied, will be insoluble even in boiling water:—Gelatine, 5 parts; soluble acid chromate of lime, 1 part. Cover the broken edges with this, press lightly together, and expose to the sunlight, the effect of the latter being to render the compound insoluble.

Glycerine Jelly.—White soft soap, 4 ozs.; pure glycerine, 6 ozs.; almond oil, 3 lbs. in summer, 4 lbs. in winter; otto of thyme; 2 drachms. Mix the soap and glycerine in a mortar, add the perfume to the oil, and rub it in gradually, taking care not to add the oil faster than it can be incorporated.—*Canad. Pharm. Journ.*

A Fine Tooth Paste.—Take red coral, 3 ounces; cuttle fish bone, 1 ounce; disulphate of quinine, ½ drachm; mix. Triturate to a very fine powder, add honey "white," 4 ounces, and a few drops of otto of roses, or neroli, dissolved in rectified spirits, 3 fluid drachms, and beat the whole to a paste. A little powdered myrrh, 1 to 3 drachms, is sometimes added.—*Dental Science.*

Preparation to Fasten Paper to Tin.—Take good, clear, pale yellow glue, break it in rather small pieces, and let it soak a few hours in cold water. Pour off the supernatant water, place the glue thus softened in a wide-mouthed bottle; add sufficient glacial acetic acid to cover the glue, and facilitate the solution by standing the bottle in warm water. This acetic glue will stick almost anything.

To Take Rust out of Steel.—Place the article in a bowl containing kerosene oil, or wrap the steel up in a soft cloth well saturated with kerosene; let it remain twenty-four hours or longer; then scour the rusty spots with brickdust. If badly rusted, use salt wet with hot vinegar; after scouring, rinse every particle of brickdust or salt off with boiling hot water; dry thoroughly; then polish off with a clean flannel cloth and a little sweet oil.—*Scientific American.*

Indelible Ink without Silver.—Mr. A. J. Foose, of Del Norte, Colorado, gives the following formula for an indelible ink without the use of nitrate of silver, which is stated to be thoroughly efficient:—No. 1. Extract of logwood, 1 lb.; water, 1 gallon. No. 2. Sulphate of iron, 4 ozs.; water, 4 ozs. No. 3. Sulphuret of potassium, ¼ oz.; water, 2 ozs. After dissolving the logwood by boiling, add No. 3 to No. 2, until the iron assumes a black colour, then add this compound to No. 1, and boil a few minutes. Add cyanide of potassium, ½ oz., which fixes the colour. For ink, add gum and alcohol; for dyes, add grease.

The Paris Exhibition.—The sum of 60,000*l.* (1,500,000 f.) is to be awarded in prizes. The jurors will consist of 650 members, of whom 350 will be foreign, and 300 French. These will be, of course, divided into classes. There are to be also 325 supplementary jurors, 175 foreign and 150 French. These are to take the place of any absent jurors. It is said that over 33,500 applications for admission have been made by Frenchmen alone; and that even this number does not include all the applications from the colonies, while in frequent cases one application represents a group of exhibitors. In 1867 the French exhibitors numbered 19,000.

Adulteration of Santonine.—A French chemist has noted a sample of santonine containing over 20 per cent. of boric acid. Pure santonine should dissolve entirely in chloroform.

To Clean Brass Scales, &c.—If the brass is very much tarnished, use a little oxalic acid solution. If spots are imbedded, rub them out with a little powdered pumice-stone. Then wash with water and dry. Mix rotten-stone with sweet oil to a paste, and rub it over the whole surface of the brass with a smooth cork until it assumes a greenish-black colour. Then wipe off completely with an old cloth. Next rub over with lampblack until thoroughly polished, using a soft smooth cork. This gives an excellent result, and repays the extra trouble it causes.

Professor Bottger recommends the following as the simplest way of giving paper and wood surfaces a crystalline coating:—Mix a very concentrated cold solution of salt with dextrine, and lay the thinnest possible coating of the fluid on the surface to be covered by means of a broad soft brush. After drying, the surface has a beautiful, bright mother-of-pearl coating, which, in consequence of the dextrine, adheres firmly to paper and wood. The coating may be made adhesive to glass by doing it over with an alcoholic shellac solution. The following salts are mentioned as adapted to produce the most beautiful crystalline coating, viz.:—sulphate of magnesia, acetate of soda, and sulphate of tin. Paper must first be sized, otherwise it will absorb the liquid and prevent the formation of crystals. Coloured glass thus prepared gives a good effect by transmitted light.

Valuable Mouth Washes.—*A Wash to Harden the Gums.*—Take ½ pint Jamaica spirits, ½ teaspoonful each of powdered alum and saltpetre, pulverised, and 1 oz. of pulverised myrrh; mix.

Sozodont, very much in use.—Take salts of tartar, ½ oz.; honey, 4 ozs.; alcohol, 2 ozs.; water, 10 ozs; oil of wintergreen and oil of rose sufficient to flavour.

For Unhealthy Gums.—Unhealthy gums are very common. A lotion made from the following receipt will be found valuable in restoring them to a healthy condition:—Carbolic acid, 20 drops; spirits of wine, 2 drachms; distilled water, 6 ozs. Use first a soft tooth brush with water, after which pour on a second tooth brush, slightly damped, a little of the above lotion. After using this for a short time the gums become less tender, and the impurity of the breath, which is commonly caused by bad teeth, will be removed.—*Dental Science.*

Improved Carmine Ink.—The solubility of carmine lake in caustic aqua ammoniæ is attended with this disadvantage—that in consequence of the alkaline properties of ammonia, the cochineal pigment will in time form a basic compound, which, in contact with a steel pen, no longer produces the intense red, but rather a blackish colour. To avoid this evil, prepare the ink as follows:—Triturate 1 gramme of pure carmine with 15 grammes of acetate of ammonia solution, and an equal quantity of distilled water, in a porcelain mortar, and allow the whole to stand for some time. In this way a portion of the alumina which is combined with the carmine dye is taken up by the acetic acid of the ammonia salt, and separates as precipitate, while the pure pigment of the cochineal remains dissolved in the half-saturated ammonia. It is now filtered, and a few drops of pure white syrup added to thicken it. In this way an excellent red drawing ink is obtained, which holds its colour a long time. A solution of gum arabic cannot be employed to thicken this ink, as it still contains some acetic acid, which would coagulate the bassorine which is one of the natural constituents of gum arabic.—*English Mechanic.*

Ounces and Drachms.—At the last meeting of the Guardians of St. George's, East, a difference of opinion between a district medical officer and the dispenser of the infirmary came under the notice of the Board. The dispenser alleged that a prescription had been sent him for an old woman for "three ounces of salts," which should have been "three drachms." As both officers contended that the other was wrong, the prescription was produced; but this did not assist in the settlement of the question, for the doctor stoutly maintained that the sign upon it was for a drachm, while the dispenser, on the other hand, as vehemently declared that the true interpretation of the sign was an ounce. The matter was ultimately referred to the dispensary committee; but, as one of the Guardians remarked, the matter, "if it had a ridiculous side, had also a very serious one, for had the dispenser given the old woman three ounces of salts, it might have been the cause of her death, and the coroner's jury would not give a verdict which would excite the mirth of the person making the mistake." The chairman pointed out that "there really was so little difference between the medical signs for ounce and drachm that he wondered people were not poisoned more frequently." With this cheering observation the discussion came to a close.—*Pall Mall Gazette.*

HAY'S GENUINE GINGER BEER.

Ginger beer should be the most wholesome, and, to most palates, the most agreeable of aërated beverages. Chiefly through the indifference of makers, it has, however, been allowed to fall into a sort of disrepute, holding its position only in the commonest class of trade. The mixture ordinarily sold as ginger beer, sweet and sticky, with a certain hot and sometimes acrid flavour, which is intended to justify its title, is not likely to attract fastidious tastes. But a chemist of Hull, Mr. William Hay, has devoted a good deal of attention to the manufacture of this beverage, and his products certainly deserve to attain great favour. His object has been to get the pure ginger flavour, and, at the same time, to produce a transparent liquid, and one which will keep indefinitely. In the commoner ginger beers a tincture of capsicum is generally employed, both for economy and because a clear liquid can be obtained with it; but the required flavour cannot thus be obtained. The ginger essence as usually prepared is more than half resin, and is itself liable to a certain acridity. Mr. Hay now prepares an essence from which the resin has been entirely eliminated, and as this essence mixes perfectly with any aqueous solution, it is itself a pharmaceutical desideratum. The ginger beer manufactured from this essence has the purest Jamaica ginger aroma, distinguishable as soon as poured out, and with no syrupy stickiness. It is a beverage fit for any gentleman's table, and ought to attain great popularity. The pains which Mr. Hay has taken to rescue an old favourite from disgrace deserve the gratitude of all who relished this renowned refreshment in their youth.

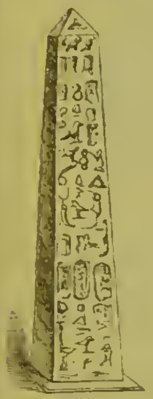
SOFT ELASTIC PARCHMENT.

Messrs. Erhardt & Co., of Bond Court, Walbrook, are makers of an article which would probably prove useful in many pharmacies where it is not now employed. This is an improved form of the vegetable parchment introduced in this country some years ago by Messrs. De la Rue & Co. The improvement consists, we believe, in the combination of glycerine with the parchment, so as to render it pliable and elastic. The article is sold by weight, of various thicknesses, and either in sheets or cut up in pieces. Its suitability for tying over jars, &c., is proved by its consumption by the great marmalade and jam makers, who buy it by the ton. The bottlers of pickles also use it for putting under their corks. It is quite impervious, and if put on wet it contracts considerably. This property and its great strength has suggested in Germany its employment as a bandage, but we are not aware that it has yet been actually so used. Chemists will find many purposes for which it will prove useful, as, for instance, tying over bottles and jars, covering corks, wrapping soaps, &c. It should be added that, being so light, it comes very cheap.

RIMMEL'S CHRISTMAS NOVELTIES.

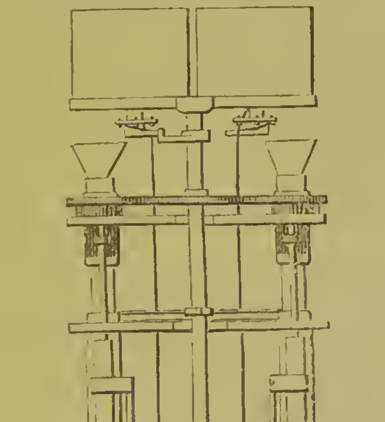
A MERRY CHRISTMAS AND A HAPPY NEW YEAR
A CHRISTMAS CAROL

Mr. Rimmell publishes three styles of almanacs for the ensuing year, all of course being lavishly perfumed. The first is gorgeously illustrated with fantastic coloured prints, allegorically representing the arts and sciences. The next is a very clever panorama, designing in an amusing series the Olympian deities in modern costume. The third is a course of fancies—sketches in which the zodiacal signs are shown indulging in nineteenth century pursuits. Among his Christmas novelties this manufacturer has skilfully adapted the famous Parisian barometric flower to a card. The flower changes from blue to rose according to the weather prospects. Cleopatra's Needle, with some scent inside, is an appropriate hit; and many other dainty ideas are happily realised in the *repertoire* of this untiring novelty-monger.



SEIDLITZ POWDER MACHINE.

The sketch accompanying this notice is copied from one which appeared in a recent issue of *New Remedies* (New York). It represents a machine invented and patented by C. R. Doane, of Brooklyn, for putting up Seidlitz and other powders with great exactness, neatness, and rapidity; its capacity, when run at a moderate rate of speed, being 500 powders per hour. The powder in bulk is placed in the receptacles on top of the machine —the acid on the left and the alkali on the right—from whence it is discharged by appropriate measures through the funnels below into papers made ready to receive it by the mechanism at the base. The whole operation of measuring, depositing, folding, pressing, and discharging is accomplished by a half-revolution of the perpendicular shaft, and the powders are cast out—the white to the left and the blue to the right—ready for boxing. A point of considerable importance is, that each powder is enveloped in two thicknesses of paper, thereby preventing deliquescence of the acid powder, and yet no more paper is used than for single thickness in handfolding—the paper used for the fold in the old method furnishing the outer wrapper in this. A device beneath the bed-plate provides for the application of power, if desired.



Trade Notes.

Mr. H. C. Mason, of Finsbury Circus, has been appointed London agent for Messrs. Moon & Baly, of Warwick, the well-known plaster makers.

⁂

We have received an illustrated price list of homœopathic medicines from Messrs. James Epps & Co. It contains besides a brief guide to homœopathic treatment, indicating the remedies suitable to various complaints.

⁂

We have received from Messrs. Corbyn, Stacey & Co. a very useful pamphlet giving notes on drugs, chemicals, and pharmaceutical preparations of recent introduction. Messrs. Corbyn & Co. publish such pamphlets occasionally, and are willing, as we understand, to send them to chemists who may apply for them.

⁂

Mr. F. G. Warrick, Her Majesty's Vice-Consul at Nice, has retired from the firm of Warrick Brothers, of London and Nice, of which firm he has been a partner nearly 30 years. The business will be carried on by Mr. R. B. Warrick, the London partner, under the style of Warrick Brothers, as heretofore.

⁂

Mr. Richard Dean, of Forest Hill, has introduced a superior kind of nursery biscuit for infants' food, very easily digestible, and well cooked. This he proposes to sell to the public through chemists, and as they are neatly put up in tins the opportunity of taking up this trade will probably be taken advantage of.

⁂

The Liebig's Liquid Extract of Meat and Tonic Wine, for the sale of which some Glasgow chemists got into trouble with the Excise a year or two ago, is now supplied as a patent medicine, and may be sold without a wine license. The preparation is a good deal improved, and no doubt contains tonic and nourishing ingredients.

⁂

An Apostle of Borax.—We have before had the pleasure of introducing Mr. Arthur Robottom to our readers, and some of them may remember a lively narrative he gave in our pages a couple of years back of his borax journeyings in California. Mr. Robottom is a veritable enthusiast, and it is refreshing to meet with one such now, even if the object of his fanaticism be no higher subject than borax. Mr. Robottom thinks if chemists would only sell borax—anhydrous borax, which they can buy for 30*s.* a cwt.—at 4*d.* or 6*d.* per lb., the world would be happy.

And he says the Civil Service Stores have already commenced that course of philanthropy. London is consequently beginning to get clean. He has just been in this office and told us marvellous tales of the virtues of his fetish—how it softens the hands in washing, or the beard in shaving whitens linen, and cleanses it far better than soda, besides that it never rots it, kills all deleterious animal life, but preserves all that is worthy to live, rapidly heals all ulcers or festering wounds, purifies children's heads, cures sore throats, removes insects from vines, prevents incrustations on steam boilers, preserves meat, and all animal or vegetable matter liable to decay, makes a delicious cooling beverage, prevents toothache, cleans sponges, brings the flavour out of tea, and, in fact, makes itself generally useful. If anyone wants to know more about it let him get Mr. Robottom's penny book, "Travels in the Far West," or apply personally at the London Borax Company, 12 London Street, E.C.

BANKRUPT.

Langford, Charles, 5 Norfolk Street, King's Lynn, chemist and oil merchant. October 26.

SCOTCH SEQUESTRATIONS.

Robertson, Andrew, Small's Lane, Lochee, aërated water manufacturer. November 2, with protection. Tr. and Com., British Hotel, Castle Street, Dundee, November 13, at 1. Claims by March 2. Agent, R. Smith, Dundee, solicitor.

Ross, James, Dunkeld, chemist and druggist. October 11, with protection. Tr. and Com., Procurators' Library, County Buildings, Perth, October 22, at 1. Claims by February 11. Agent, J. Kippen, Victoria Buildings, Perth.

LIQUIDATIONS BY ARRANGEMENT OR COMPOSITION.

Notices of first meetings of creditors have been issued in re the following estates. The dates are those of the "London Gazette" in which the notices first appeared.

Bury, John Carleton, Wisbeach, Cambridgeshire, and Hunstanton, Norfolk, surgeon. October 19.

Llewellyn, David, Bullring, Llantrissant, Glamorganshire, chemist and stationer. October 11.

Miles, Charles Thomas, trading as Miles & Co., Sinkfield Lane, Red Hill, mineral water manufacturer. October 17.

Taylor, Herbert, Kingsclere, Hants, surgeon. October 3.

Trenchard, John, Pontypridd, Glamorganshire, aërated water manufacturer. October 10.

Whitworth, Frank, 33 Pigott Street, Birmingham, chemist. October 16.

DIVIDEND.

Wilkinson, Henry W. (Liq.), Howard Street, Sheffield, chemist. 1st and final div. 2s.; J. Hadfield, 40 Bank Street, Sheffield.

PARTNERSHIPS DISSOLVED.

Brooksbank & Brooksbank, Keighley, oil refiners.

Clay, Clay & Bennett, Liverpool, oil merchants; as far as regards Ralph Lowe Clay.

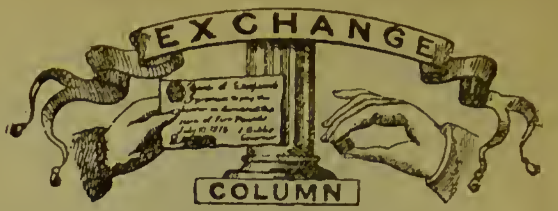
Greig & Newstead, Clifton, surgeons.

Moore & Fletcher, Accrington, mineral water manufacturers.

Slater, Hill & Abbott, Old Bond Street, perfumers.

Smith, Lightbourne & Derham, Preston, druggists.

Stacey & Hobson, Bangor, soda water manufacturers.



Terms.—Announcements are inserted in this column at the rate of one halfpenny per word, on condition that name and address are added. Name and address to be paid for. Price in figures counts as one word.

If name and address are not included, one penny per word must be paid. A number will then be attached to the advertisement by the Publisher of The Chemist and Druggist, and all correspondence relating to it must be addressed to the "Publisher of The Chemist and Druggist, Colonial Buildings, Cannon Street, London, E.C.," the envelope to be endorsed also with the number. The publisher will transmit the correspondence to the advertiser, and with that his share in the transaction will cease.

FOR DISPOSAL.

Fine Tinnevelly senna, 4*d*. per lb., in 14-lb. and 28-lb. lots. Send stamp for sample to A. Smith, Crediton.

Large marble mortar, 16 inches. Offers to G. Harris, Chemist, Haverfordwest.

Statham's 42*s*. student's chemical cabinet, quite new and unused, price 25*s*. 27/86.

First three volumes *Pharmaceutical Journal*, clean, perfect, half calf. Brown, Chemist, Dover.

"L'Officine ou Répertoire Général de Pharmacie Pratique," quite new, never been used, cost 15*s*., will sell for half-price. 39/86.

Six Maw's tooth instruments and four Pulvermacher's bands. Particulars on application. Offers wanted. 14/87.

Copper still, with worm and tub complete, quite new, cost 8*l*. 6*s*. Offers wanted. Davies, Chemist, Tenby.

Elegant shop stove, Wright's Patent "Calorifer," equal to new, cost 5*l*., price 2*l*. 10*s*. J. Guy, Chemist, Chester.

Three years' *Chemist and Druggist*, 1872, 1873, 1874, 15*s*. Wynter, Chemist, Seaford.

B.P., 1867, and Fownes' "Chemistry," 10*s*. 37 Milton Street, Newcastle-on-Tyne.

Several dozen trusses, cheap; the *Lancet*, January to July, 1877. 36/87.

Corks, best taper vials, and daffys, 80 gross, taper pops, 7½*d*. Samples, Harrop, Chemist, Middleton, Manchester.

Three cwt. tin crystals at 5*d*. H. Harrop, Chemist, Middleton, Manchester.

Scarificator, as fig. 3 Maw's list, dispensing scales, and two marble slabs, for cash or small copper. 13/88.

Bentley and Trimen's "Medicinal Plants," first 22 parts, new, what offers? 16/88.

Steggall's "First Lines," 2*s*.; Owen's "Conspectus," 1*s*. 6*d*. Y. C., 1 King Street, Dover.

Twelve dozen genuine porous plasters at 6*s*. 10*d*. per dozen, delivered. 6/90.

Three cases quart Vichy Water, "Celestins," in stock twelve months, 25*s*. each. [Yorkshire] 5/90.

Southall's 30*s*. materia medica cabinet, 20*s*.; herbarium of 70 indigenous plants, 5*s*. 6*d*. 31/89.

Small Pindar's pill machine, press and kneader. J. Archer, Chemist, Lechlade.

Good medical coil and battery in exchange for 2-grain pill machine to cut 36. J. Bamber, 9 Lupus Street, Pimlico.

Southall's materia medica cabinet, 140 specimens; price 12*s*. 6*d*. W. H. Cooper, 35 High Street, Bridgnorth.

Superior 3-light gas pendant, made to order for chemist's shop, cost 2*l.* 10*s.*, take 30*s.* G. Briggs, Goole.

Tanner's "Practice of Medicine," in 2 vols., by Dr. Broadbent, quite new. What offers? 27/149.

Pharmaceutical specimens, chemicals, apparatus, specific gravity balance, tinctures, extracts, powders, materia medica, cheap. 59 Barnsbury Road, London.

Twenty-two volumes of the *Pharmaceutical Journal*, from 1842 to 1863, in good condition, bound in half-calf, marble sides, 22 books, price 5*l.* Address, Chantry, Chemist, Goole.

Rare specimen Pharmacopœia. 1721, complete; also Mohr and Redwood's "Practical Pharmacy." What offers? Mrs. Hains, Red Hill, Chislehurst.

Twelve gross white seamless indiarubber teats, quite new, small, 3*s.* 6*d.* gross; medium, 5*s.* 9*d.*; samples, 6*d.* "Druggist," 13 Ampton Place, Gray's Inn Road, W.C.

Volumes and odd numbers *Chemist and Druggist*, *Pharmaceutical Journal*, 1860 to 1876, forwarded anywhere for half-price, carriage paid. Williams, Chemist, Coleford, Gloucestershire.

Squire's "Companion to the British Pharmacopœia," 10th edition, published at 10*s.* 6*d.*, for 6*s.* X. B., 75 High Street, Barnstaple.

Mahogany glass case, as Maw's fig. 40, plain top, 3 feet 6 inches long, 7 inches deep, and 25 inches high, in good condition. Offers wanted. Davies, Chemist, Tenby.

A mercurial ointment machine, large enough to kill 14 lbs mercury, may be driven by band or steam power, in good condition; cost 4*l.* 10*s.*, will take 2*l.* 10*s.* H. H., Kettering.

Crown Perfumery Company's perfumes, pomades, &c., condition equal to new; large busts of Harvey and Hunter, by Bruziotti. 30/87.

Cigars, value 42*l.* retail, will be sold for 20*l.* net cash by advertiser, who is giving up sale of tobacco. Bulgin, Pharmaceutical Chemist, Gravesend.

About 10 cwt. of bisulphate of potash; no use for it; will sell cheap, whole or part, offers requested. Tipton, St. George's, Wellington, Salop.

Southall's materia medica cabinet, nearly new, 39*s.*; Hanbury's "Science Papers," quite new, 18*s.* What offers? "Vincit," Mr. Savage, Chemist, Ealingdon, Bradford.

London Pharmacopœia, 1639, Rivers' "Medicinc," 1655, Hooper's "Vade Mecum," 1809, all in good condition. What offers? Cash or exchange for anything useful. 6/86.

Excellent mahogany cigar case, with bent-glass case above, 5½ feet by 2 feet; also substantial deal desk, 3½ feet long. Further particulars on application to Jones, 2 Dark Gate, Carmarthen.

Owen's interleaved "Synopsis of the Pharmacopœia," forms a useful note-book for private formulæ, published at 2*s.* 6*d.*, free by post, 15 stamps. "Publisher," 285 Camberwell Road.

A glass case similar to fig. 40 Maw's catalogue, 6 feet long; ditto fig. 43, 2½ feet long; Anglo-Havana Company's cigars, in cases, or exchange for glass case 4½ feet long, fig. 101. Apply to Wallington, Freshwater, I.W.

Genuine English lever silver watch, capped, jewelled 10 holes, good as new, thorough order, cost 7*l.*, take 4*l.* 4*s.* or part exchange patents. Dickie, Chemist, St. George's, Wellington, Salop.

Excellent microscope by Field, 3 powers, dissecting lenses, mounting materials, and apparatus, slides, &c., in mahogany cabinet, only 2*l.* 15*s.* "Student," 11 Eagle Parade, Buxton.

Gentleman's morocco travelling bag, fitted with ivory razors, brushes, &c., never been used, price 18*s.*; Pope's best electro-plated drawing-room air pistol, in box, complete with all implements, darts, slugs, and targets; 21*s.*, cost 35*s.* R. Halford, New John Street, Birmingham.

A pair of very handsome specie jars, with stands, 6 guineas, cost 10 guineas; 19 Tomlinson's glycerine dip, 2*s.* 6*d.* size, 25*s.*; 11 Tomlinson's glycerine wash, 1*s.* 6*d.* size, 10*s.*; 9 tincture Warburge, 4*s.* 6*d.* size, 18*s.* Lawson, Chemist, Whitstable.

Wholesale druggist's stock for disposal; great bargains; lists on application; 6 cwt. pulv. glycyrrh.; 10 lbs. vanilla; 1 cwt. diapente; 3 cwt. mol. jam; 2 cwt. pul. rhei E.I.; 1½ cwt. p. jalap; 56 lbs. p. myrrh turc., &c. Lloyd Rayner, 333 Kingsland Road.

Vertical engine and boiler and soda-water machine, with double pump and 10-gallon cylinder gas works, and two bottling racks, second-hand, will make 2,000 dozen per day, a bargain for 123*l.*, as good as new. Apply, N. G. Wilcocks, Back Street, Bath.

Offers wanted for a 7*l.* 7*s.* Evans & Lescher's Materia Medica Cabinet, new, one Day & Millward's 11-in. beam agate scale, on mahogany box, with drawer, not used, and set of brass weights, neat; ¼ doz. 4*s.* Roche's embrocation, carriage paid on each. T. Davies, Chemist, Rhymney.

The entire fittings and utensils of a chemist's shop for sale. Drawers, bottles, jars, scales, mortars, pill machines, glass jars, specie jars, extract pots, measures, carboys, glass cases, counter desk and case, &c., very cheap, room wanted. E. Natali, 213 Old Street, E.C.

Large inlaid musical box, 12 airs, inner lid, patent winder, 6*l.*; powerful electro-magneto machine, double magnets, mahogany case, 16*s.* 6*d.*; small fireproof safe, "Climax" detector lock, 3*l.* 5*s.*; six-chambered breechloading revolver, excellent weapon, 12*s.* 6*d.*; owner going abroad. "Medicus," 67 Constitution Hill, Birmingham.

A 10-ft. bent plate-glass counter case, as Maw's 104, 10*l.*, a bargain, equal to new; a 7 ft. 6 in. ditto, in one sheet of plate-glass, 7*l.* 10*s.*; a 5 ft. 4 in. ditto, as 105, 7*l.*; a 5 ft. 9, as 98, 5*l.*; a 6 ft. ditto, fig. 99 Maw's, 6*l.* 10*s.*; a 3 ft. 6, as No. 16, 65*s.*; a quantity of others of all sizes in stock. E. Natali, 213 Old Street, London, E.C.

Fifty questions asked (with prescriptions given to dispense) at the last Minor, 2*s.*; also 15 fresh indigenous botanical specimens of medicinal and other plants in season, carefully described, sent, carriage paid, for 5*s.*, invaluable to December candidates. James Saunders, A.P.S., 79 Gaisford Street, N.W.

Sale or exchange.—Maw's stoppered bottles in boxwood cases, two 8-oz., nine 6-oz., four 4-oz., sixteen 2-oz., three 1-oz., N. M.; fifteen 6-oz., sixteen 4-oz., seventeen 2-oz., W.-M.; six 7*s.* 6*d.* Douglas's hair restorer; five 2*s.* Beetham's hair wash; one 5*s.* Poudre Unique; one 3*s.* 6*d.* Delcroix's vegetable extract. Offers wanted. Townley, Keswick.

Electro-rotary magnetic apparatus, graduated power. from gentle current for nervous debility to strong suitable for lecture demonstrations, quite new, 18*s.*; handsome polished walnut case, double magnet, portable, 35*s.*, free to any station. Wanted, mahogany drawers, blue syrups, pill jars, &c., 6-oz., 8 oz. bottles, &c., phials. P.O.O. to W. Sharpe, Madeley, Salop.

2 ft. 9 long, 3 ft. long, 4½ ft. long, 6 ft. long, 9 ft. long bent plate-glass counter cases, as figs. 7, 100, 101, 104, 105 Maw's; 2 ft. 6 long case, as fig. 3 Maw's; case and desk, 2 ft. long, as fig. 13 Maw's; case and desk, with mirror back and glass shelves, 2 ft. long, as Treble's 76; 2 ft. long, 4 ft. long upright plate-glass cases, as fig. 40 Maw's; 5 ft. 9 long, 6 ft. long, 7 ft. long handsome dispensing screens, as 164 Maw's and 136 Treble's; tooth-brush case, as 72 Maw's; 2 upright mahogany cases, 4 ft. and 6 ft. long; label chest, as fig. 26 Maw's; two 2 ft. 8 long, two 5 ft. 4 long, two 6 ft. long, one 10 ft. 8 long, one 12 ft. long, one 18 ft. long nests mahogany fronted gold-labelled shop drawers; one 5 ft. 4 long nest; 72 deal stained mahogany fronted small shop drawers; handsome mahogany nests shop drawers, with shelving, lockers, pilasters, cornice, &c., complete, 10 ft. and 12 ft. long; handsome mahogany wall cases, with cupboards under, similar to Maw's 202 to 205, 6 ft. long, 6¼ ft. long, 8 ft. long, 9 ft. long, 9 ft. 8 long, 12 ft. long. Lloyd Rayner, 333 Kingsland Road, London, N.

Splendid mahogany upright counter case, length 5 feet, height 2 feet 10 inches, depth 8 inches, surmounted by a splendid piece of carved work, 10 inches high, tapering to each end, with clock in centre, price with clock, only 10*l.*; well made outside lamp, octagon, ruby and blue glass, surmounted with gilded mortar and pestle, cheap, 50*s.* Jenkinson, Chemist, Sheffield.

Handsome bent plate-glass double show case, 2 feet long, 24 inches wide, the lower case fitted with 2 velvet laid trays, the upper with 3 plate-glass shelves, with polished edges, and mirror doors to each case; price 4*l.* 10*s.*; bargain; sketch on application; also Epps's No. 4 homœopathic show case, with tablet and drawers complete. Price 21*s.* "Extension," 110 Cheltenham Road, Bristol.

Self-feeding gas stills, require no attention, in six hours supply 1 gallon distilled water, many gallons of hot water, and sufficient warmth for a front shop in winter, at a cost of ½*d.* per hour; boiler, tinned copper; worm, block tin; form ornamental; will stand on counter or pedestals; sketch on application; price 6*l.* 13*s.*, cash; pedestals 1*l.* 15*s.* extra. Brown, Chemist, North Shields.

A desk and case, as Maw's fig. 21, 65*s.*; a ditto, as fig. 29 Maw's, 50*s.*; a sponge case, as fig. 92, 5*l.*; a ditto, 3 ft. long, 6*l.* 10*s.*; a sponge case, as fig. 90, 4*l.*; also every requisite for a chemist's shop, about 250 mahogany fronted shop drawers, about 28 ft. run in nests, sound dovetailed drawers, at 1*s.* 3*d.*; every possible requisite at very low prices. E. Natali, 213 Old Street, E.C.

Offers wanted for the following, viz., galvanic battery in mahogany case, complete, by Pratt, London, cost 6*l.* 10*s.*; one ditto by Wood, Manchester, cost 4*l.* 10*s.*, both equal to new; 12 gross corks for feeding bottles; 12 gross tubes for ditto; 1 gross each 2 and 4 oz. oval pomade bottles, white; 1 set of new gramme weights in mahogany box, brass tongues, most accurately and elegantly finished. 25/89.

A 7 ft. dispensing screen, glass case at each end, looking-glass centre, with marble slab in front, the cases have looking-glass backs, and shifting shelves inside, case on top, handsome tablets and scroll work, the back outside fitted with shelves for dispensing bottles, a very elaborate case, all plate-glass, 9*l.*, a bargain; a 6 ft. ditto, 8*l.* 10*s.*; a 6 ft., as 164 Maw's, 7*l.*; a 4 ft. 9 ditto, 90*s.*; a 3 ft. 6, as 163, 70*s.*; a 4 ft. glass case, to stand on floor, marble top, 12 in. deep, 4*l.* 10*s.* E. Natali, 213 Old Street, E.C.

2 feet 9 square plate-glass mirror, in ebonised frame; 8½ feet long, 9 feet long, 10 feet long, handsome mahogany dispensing counters; 14 mahogany-top counters, from 3½ feet to 24 feet long; 4 handsome mahogany window enclosures; 50 pear-shape carboys, from 1 gall. to 14 gall.; 12 handsome gold-labelled specie jars; 1 doz. 3-lb. lozenge jars, with gilt covers; 14 handsome labelled jujube jars; 18 handsome show jars, with gilt covers and labels inside for powder puffs, &c., as figs. A and D, Maw's; 500 gold-labelled shop bottles; 2 doz. syrup bottles; 1 doz. patent oil bottles; fifty ½ and 1-gall. stock bottles. Lloyd Rayner, 333 Kingsland Road.

FORMULÆ.

The method of cutting and preparing pumice stone in pieces for toilet use, 10*s.* 32/87.

Formula for tic pills, and specific, warranted to cure, 30 stamps. 38/88.

First-class recipes for ess. bouquet and aquæ lavand., 5*s.* each. "Chemist," 32 Buston Road, Huddersfield.

Cod liver oil emulsion, chlorodyne, inseparable lime cream, liquid preparation for cleansing the teeth, 18 stamps each. 34/87.

Advertiser has one of the largest collections in Europe of first-class English and foreign receipts, including numerous toilet and proprietary preparations, veterinary receipts, &c. List sent on receipt of stamped envelope. Single receipt, 2*s.* 6*d*; six, 7*s.* 6*d.*; twelve, 10*s.* 6*d.*; twenty-four, 20*s.* 7/88.

Formula for sauce, one of the best made, 5*s.*; Rondeletia, as good as any maker's, 1*s.* 6*d.*; glycerine jelly, a capital form, 1*s.* 6*d.*; a good proprietary cough mixture, 2*s.* 6*d.*; Bengal currie powder, from a native, 1*s.* 6*d.*; chutney, 1*s.* 6*d.* 32/87.

Valuable recipe for mange ointment, as used by the Earl of Haddington and principal dog breeders throughout the country, 10*s.* 6*d.*; also valuable recipe for distemper balls, which seldom fail to cure, 7*s.* 6*d.* Walker, 13 Annfield Row, Dundee.

Furniture paste; very superior; cleans and puts a hard gloss on polished or other furniture, &c., 2*s.* 6*d.* Baking powder, prize medal, 2*s.* 6*d.* The excellence of these preparations secure for them a large sale; profits good; send for sample, post free. 30/90.

WANTED.

Lancet, posted free every week. Lowest terms to 8/87.

Travis's washing colloid. Brown, Chemist, Dover.

Piesse's "Art of Perfumery." Clarke, Chemist, Ipswich.

Second-hand Maw's counter glass-case, Fig. 105. Replies, with lowest quotations, to W. H. Rees, Chemist, Haverfordwest.

Copy of Flückiger and Hanbury's "Pharmacographia;" state price and condition. J. S. Ward, 23 Colliergate, York.

One large and two small pear-shaped carboys; must be cheap. Clifford, 21 Market Place, Tamworth.

Squire's "Companion," latest edition. Duck, 104 Bute Docks, Cardiff.

Squire's "Companion," latest edition. Williamson, 300 Bute Street, Cardiff.

Specie jar, labelled sulphur, also a Phœnix. Gare, Bampton, Devon.

Attfield's "Chemistry," late edition. R. Rowell, Chemist, Houghton-le-Spring, near Durham.

Bentley's "Botany," cheap, will give Roscoe's "Chemistry" for Barber's "Pocket Pharmacopœia." Wynter, Chemist, Seaford.

ADDRESSES AND INFORMATION WANTED.

Mr. F. Whadham—sporting man, great knowledge of greyhounds. W. Banbury, Chemist, Marlow.

Name and address of makers of "Lustrine." W. & T. Jones & Co., 98 Southwark Street, S.E.

Coated Pills.—Advertiser will pay for instruction in pill coating; must be equal to standard makers. Apply, stating terms, to J. H. Bolton, 251 Gray's Inn Road, W.C.

EXTRAORDINARY PHENOMENON.—The *Medical Press and Circular* for October 24, alluding to the speech of the Duke of Leinster at the capping of graduates at Queen's College, Dublin, has the following sentence:—"In the Faculty of Arts eighteen candidates presented themselves for the degree of Bachelor of Arts, of whom forty-two have satisfied the examiners." In the same article, which condemns the system of medical licensing carried on at this college, occurs the following sentence:—"Those who believe that a single examination upon graduation supplies adequately the place of three years of steady study of the eye, ear, and mind in dissecting-room and hospital, may consider that all the professional and social requirements of a Doctor of Medicine and a gentleman are provided for by the thirty months of provincial college residence and a fifty-pound note." Previously we had imagined that a medical student was compelled to direct his attention to the study of disease in whatever portion of the body it might show itself. It appears, however, from this sentence that the study of the eye, ear, and mind is the best qualification for the treatment of lung or bowel complaints.

THE Board of Trade returns for October show an increase of nearly 600,000*l.* over those for October, 1876. This, taking into consideration the lower prices now ruling in most departments of British produce, is a satisfactory proof that the volume of our foreign trade is moderately improving. The increase is very fairly spread over nearly all varieties of industry.

The alkali trade is no better as regards prices, though the shipments bulk well.

There is a slight drop in the quotations for soda, the closing quotation for crystals being 3*l.* 12*s.* 6*d.* to 3*l.* 15*s.* per ton, ex ship. Ash, 1⅝*d.* per cent. per cwt. ex ship to 1¾*d.* landed. Bicarb., 10*s.* 4½*d.* to 10*s.* 6*d.* per cwt., with a moderate business doing. For caustic the London quotations are 12*l.* 10*s.* per ton for cream, and 12*l.* 15*s.* for white 60 to 62 per cent., and 15*l.* 5*s.* for 70 to 72 per cent., with a fair average demand. Bleaching powder is steady at 6*s.* 3*d.* per cwt. landed, with a fair business. Cream of tartar somewhat firmer than it has been, but still quoted at 99*s.* per cwt.

ACIDS.—A very considerable business has been done in tartaric, and prices are firm at 1*s.* 5*d.* per lb. for English crystals or powdered, and 1*s.* 4½*d.* for foreign crystals. Citric has been sold down to 2*s.* 2½*d.* per lb., but has since met with more demand, and closes firmer at 2*s.* 3*d.*

Sulphate of copper has slightly given way, and ordinary first quality is now offered at 20*s.* to 20*s.* 3*d.* per cwt.

Saltpetre is offered on slightly easier terms. Refined borax is not active; English is quoted at 38*s.* 6*d.* to 40*s.*; Californian 35*s.* to 37*s.*

Antimony and bismuth are both, with their preparations, somewhat higher, but bromides are rather cheaper. Mercury has fallen again. The iodine makers seem to have come to terms, and are gradually advancing the price of their product. The last price is 1*s.* per ounce. Glycerine is expected to be higher during the winter.

At recent drug sales purchases have not been extensive. Among the transactions have been good Tinnevelly senna, 9½*d.*; castor oil, good seconds, 4¾*d.*; Japan aconite, 42*l.*; Tonquin musk, a moderately good sample, 52*s.*; Nepaul inferior, 48*s.*; superior being bought in at 65*s.*; cassia fistula, good Dominica, 89*s.* (a heavy advance); guarana, medium, 4*s.* 9*d.*; good Australian honey, 64*s.* (Chili is worth 45*s.* to 50*s.*, and Jamaica about 40*s.* to 45*s.*); Jamaica sarsaparilla, 2*s.*: Honduras, 1*s.* 4*d.*; West Indian tamarinds, 27*s.* 6*d.*; China vermilion, 2*s.* 2*d.*; Jamaica beeswax of good appearance, 7*l.* 15*s.*; concentrated Dominica lime juice, 6*s.* 6*d* to 7*s.* 10*d.*; Norwegian cod liver oil (good, but not first-class), 4*s.* 1*d.*; jalap, good but small, 8¾*d.*; almond oil, both expressed and essential, it will be noticed, is considerably dearer. Some sandal wood chips put up at last auction were announced as being slightly tainted with asafœtida! They did not find a customer, but were bought in at 22*l.* Good quality would be worth 40*l.* to 50*l.*

Isinglass is held for higher rates. The few cases sold at last special auctions realised a slight advance, but holders withdrew the bulk, requiring a still better price. Cantharides seem likely to be dearer. There are none of very good quality offering just now, and there is some demand. Musk and otto of rose are both in strong demand, and the price is continually advancing. China soy is selling at 2*s.* to 2*s.* 3*d.* per gallon. Fifty cases of Japan, each case containing 14 quart bottles, was offered at recent auction, and bought in at 20*s.* per case. Rhubarb is a little easier, and opium is motionless. Good crops of saffron are reported from France, and of bergamot and lemon from Sicily. English peppermint oil is cheap, but English lavender very scarce. Citronella oil is also firmer.

GUMS.—Arabic: A fair inquiry experienced, except for ordinary qualities, which are slow of sale. Animi: Zanzibar remains very scarce, and high prices continue to be paid. Asafœtida: No change. Ammoniacum: Not much doing, pending the new arrival of 73 cases to be offered. Benjamin: Siam scarcely obtainable; Sumatra, seconds and firsts, are still in request, but false packed and thirds remain difficult to quit. Damar sells moderately at an advance. Copal: Macassar and Manilla continue without much export demand, especially for ordinary qualities, of which the stock is still large. Gamboge: Qualities below fine rather cheaper. Myrrh: Market closes flat, the supply being more plentiful. Olibanum continues to meet with but little attention. Kowrie: Australian parcels brought forward meet with a moderate demand, but prices without material alteration.

The bark sales have not been animated, though prices have been fairly maintained, especially in E. I. sorts. Calisaya has slightly receded.

Camphor has given way to the extent of 2*s.* 6*d.* per cwt.

Oils have experienced no great change during the month. There has been a steady sale of olive, but not enough to cause an advance in the quotations. Linseed oil has been in abundant supply, and a still further decline is to be reported. The present price in London is about 29*l.* 7*s.* 6*d.*, nearly 1*l.* lower than last month. Rape oil has also declined to about the same extent, but has slightly rallied during the past eight or ten days. Palm oil is a trifle higher, and cod has noticeably strengthened, being now held for 35*l.*

American turpentine has arrived freely, and holders have let the market have its way. The price has consequently fallen rather rapidly. A week ago business was done at 22*s.* 9*d.* spot, but a firmer tone has since set in, and the present quotation is 23*s.* 6*d.* to 23*s.* 9*d.* Petroleum has had a weak tendency, and large sales have been made at receding figures. A slight reaction is, however, observable this week, and at present 11⅝*d.* to 11¾*d.* is the London price for spot, 11⅜*d.* to 1*s.* for December, and 11½*d.* to 11¾*d.* for January. Rosin (American strained) is quoted at 5*s.* 7½*d.* to 5*s.* 9*d.* Further dulness has been manifested in shellac, which sells at 2*s.* to 5*s.* per cwt. lower than last month.

Linseed is arriving in smaller quantities, but the demand is correspondingly sluggish. A little life in the trade might result in a few shillings advance. Rapeseed is dull, but cotton seed is at present very scarce, and is not for the moment obtainable in London for less than 9*l.* 2*s.* 6*d.*, but cargoes to arrive are willingly sold at 10*s.* less.

The table below is a statement of the stocks, landings, and deliveries of the following goods at the port of London from January 1 to October 31, 1877 and 1876:—

	Stocks		Imported		Deliveries	
	1877	1876	1877	1876	1877	1876
Aloes ... cs	2,036	1,921	1,933	2,860	2,261	1,592
" ... kegs	20	31	—	1	5	1
" ... gourds	2,631	1,759	2,903	2,204	1,931	1,429
Aniseed, Star ... cbts	1,082	625	263	1,398	911	1,014
Arrowroot ... cks	14,061	11,300	14,858	16,014	10,603	10,735
" ... bxs & tins	6,647	4,716	9,243	8,957	6,780	6,293
Balsam ... cks, &c.	342	444	490	725	504	466
Bark, Medicinal ... cks, &c.	1,153	123	3,298	610	2,295	613
" ... srns, &c.	10,378	9,684	23,581	28,489	21,879	35,323
" Tanners' ... tns	4,192	4,777	7,965	9,631	8,696	7,089
Borax ... pkgs	1,031	1,598	429	3,420	799	5,719
Bees' Wax ... bls & srns	485	348	299	443	228	506
" ... cks & cs	1,390	867	2,117	1,988	1,697	1,590
" ... cakes	48	210	188	978	259	1,504
Japan vegetable ... pkgs	6,752	4,984	5,430	6,144	6,210	7,453
Camphor ... pkgs	6,979	3,568	5,710	3,530	5,138	7,232
Cardamoms ... chts	636	777	490	1,413	685	1,200
Cocculus Indicus bgs, &c.	2,479	2,458	554	1,181	464	921
Colombo root ... pkgs	619	799	375	235	472	344
Cream of Tartar ... cks	80	69	213	240	226	237
Cubebs ... bgs	352	447	132	216	60	154
Dragonsblood ... cbts	126	81	197	183	131	139
Galls, E.I. ... cks & cs	4,759	1,346	7,306	5,119	4,546	4,596
Ipecacuanha ... cks & bgs	265	187	471	453	369	495
Jalap ... bls	616	570	343	145	377	279
Nux Vomica ... pkgs	1,642	952	1,771	3,761	1,637	5,088
Oil—						
Castor ... cks	—	—	4	213	4	242
" ... cs	4,488	1,702	12,457	10,786	12,816	10,716
" ... dpprs & tins	1,782	3,362	7,445	11,891	8,078	13,675
Palm ... tns	282	539	1,842	2,403	2,067	2,729
Cocoanut ... "	2,461	3,399	8,768	9,250	9,146	9,506
Olive ... cks, &c.	1,548	803	5,383	2,781	4,301	3,187
Aniseed ... cs	366	210	575	736	428	566
Cassia ... "	870	212	703	80	235	144
Opium ... cbts, &c.	1,270	662	—	—	—	—
Rhubarb ... chts	1,097	753	1,625	1,617	1,476	1,599
Saltpetre, Pt. ... tns	4,858	6,177	7,388	9,014	7,890	8,915
Sarsaparilla ... bls	1,106	1,101	2,270	2,576	2,079	2,203
Senna ... bls, &c.	3,548	2,362	4,381	1,574	3,364	1,964
Shellac ... cs, &c.	37,367	23,991	38,124	35,347	27,656	29,931
Terra Japonica, Gambier tns	1,824	1,101	7,069	6,035	6,182	5,223
Cutch ... "	2,364	2,979	2,038	2,338	2,393	2,330
Turmeric ... "	998	365	1,958	1,390	1,596	1,436

Monthly Price Current.

The prices quoted in the following list are those actually obtained in Mincing Lane for articles sold in bulk. Our Retail Subscribers must not expect to purchase at these market prices, but they may draw from them useful conclusions respecting the prices at which articles are offered by the Wholesale Firms.

CHEMICALS.

	1877.					1876.				
	s.	d.		s.	d.	s.	d.		s.	d.
ACIDS—										
Acetic ....per lb.	0	2¾	to	0	0	0	3½	to	0	0
Citric .... ,,	2	3	..	0	0	2	8	..	0	0
Hydrochlor......per cwt.	5	0	..	7	0	4	0	..	7	0
Nitric ....per lb.	0	4¾	..	0	0	0	4¾	..	0	0
Oxalic .... ,,	0	5	..	0	0	0	5½	..	0	5½
Sulphuric ...... ,,	0	0¾	..	0	1	0	0¾	..	0	1
Tartaric crystal.. ,,	1	5	..	0	0	1	5	..	0	0
powdered ,,	1	5	..	0	0	1	5	..	0	0
ANTIMONY ore ......per ton	240	0	..	300	0	295	0	..	300	0
crude .. per cwt.	37	0	..	0	0	42	0	..	0	0
star...... ,,	48	0	..	0	0	54	0	..	56	0
ARSENIC, lump ...... ,,	25	0	..	25	6	26	6	..	27	0
powder.... ,,	8	3	..	8	6	10	0	..	0	0
BRIMSTONE, rough ...per ton	105	0	..	120	0	120	0	..	130	0
roll .. per cwt.	9	6	..	10	6	10	0	..	0	0
flour.... ,,	11	6	..	13	6	13	6	..	0	0
IODINE, dry ....per oz.	1	0	..	0	0	0	5¾	..	0	0
IVORY BLACK, dry .. per cwt.	8	6	..	0	0	8	6	..	0	0
MAGNESIA, calcined..per lb.	1	10	..	0	0	1	8	..	0	0
MERCURY ....per bottle	147	6	..	0	0	190	0	..	0	0
MINIUM, red ...... per cwt.	21	9	..	22	0	23	3	..	0	0
orange .. ,,	33	0	..	0	0	37	0	..	[illegible]	0
PRECIPITATE, red . per lb.	3	8	..	0	0	4	2	..	0	0
white ,,	3	7	..	0	0	4	1	..	0	0
PRUSSIAN BLUE .. ,,	0	0	..	0	0	0	0	..	0	0
SALTS—										
Alum ....per ton	142	6	..	145	0	145	0	..	150	0
powder...... ,,	155	0	..	0	0	155	0	..	160	0
Ammonia:										
Carbonate ...... per lb.	0	5½	..	0	5¾	0	5	..	0	5¼
Hydrochlorate, crude, white .... per ton	560	0	..	720	0	560	0	..	670	0
British (*see* Sal Am.)										
Sulphate........ per ton	400	0	..	415	0	370	0	..	880	0
Argol, Cape ......per cwt.	75	0	..	95	0	80	0	..	87	0
Red........ ,,	67	0	..	73	0	70	0	..	75	0
Oporto, red. ,,	33	0	..	0	0	33	6	..	34	0
Sicily ...... ,,	60	0	..	65	0	0	0	..	0	0
Ashes (*see* Potash and Soda)										
Bleaching powd...per cwt.	6	3	..	0	0	7	6	..	7	9
Borax, crude...... ,,	27	0	..	38	0	30	0	..	40	0
British refnd. ,,	40	0	..	0	0	41	0	..	42	0
Calomel ....per lb.	3	3	..	0	0	3	9	..	0	0
Copper:										
Sulphate ....per cwt.	20	0	..	20	3	21	6	..	22	0
Copperas, green..per ton	55	0	..	60	0	55	0	..	60	0
Corrosive Sublimate p. lb.	2	8	..	0	0	3	2	..	0	0
Cr. Tartar, French, p. cwt.	99	0	..	100	0	102	0	..	103	0
brown ,,	90	0	..	0	0	80	0	..	85	0
Epsom Salts ....per cwt.	4	3	..	6	0	5	3	..	7	0
Glauber Salts .... ,,	3	0	..	4	6	4	6	..	5	6
Lime:										
Acetate, white, per cwt.	11	0	..	20	0	11	0	..	20	0
Magnesia: Carbonate ,,	47	6	..	0	0	45	0	..	0	0
Potash:										
Bichromate ....per lb.	0	3¾	..	0	4	0	4¾	..	0	0
Carbonate:										
Potashes, Canada, 1st sort ......per cwt.	21	6	..	23	0	26	0	..	0	0
Pearlashes, Canada, 1st sort ......per cwt.	33	0	..	0	0	34	0	..	35	0
Chlorate ......per lb.	0	8	..	0	8½	0	10	..	0	0
Prussiate .... ,,	0	10¼	..	0	11	1	0	..	1	0¼
red.... ,,	0	0	..	0	0	0	0	..	0	0
Tartrate (*see* Argol and Cream of Tartar)										
Potassium:										
Chloride......per cwt.	0	0	..	0	0	7	0	..	0	0
Iodide ....per lb.	14	0	..	0	0	7	9	..	8	0
Quinine:										
Sulphate, British, in bottles ......per oz.	12	0	..	0	0	11	9	..	0	0
Sulphate, French ,,	11	6	..	11	9	10	6	..	0	0
Sal Acetos ......per lb.	0	7	..	0	7½	0	7½	..	0	8
Sal Ammoniac, Brit. cwt.	41	0	..	45	0	44	0	..	45	0
Saltpetre:										
Bengal, 6 per cent. or under ......per cwt.	20	3	..	21	0	19	0	..	19	6
Bengal, over 6 per cent. per cwt.	19	3	..	20	0	18	3	..	18	9
British. refined ,,	25	0	..	26	6	23	6	..	24	9
Soda: Bicarbonate, p. cwt.	10	4½	..	10	6	11	3	..	11	6
Carbonate:										
Soda Ash ..per deg.	0	1⅝	..	0	0	0	15/16	..	0	2
Soda Crystals per ton	72	6	..	75	0	87	6	..	90	0
Hyposulphite, per cwt.	0	0	..	0	0	0	0	..	0	0
Nitrate ...... ,,	15	0	..	15	3	12	6	..	0	0
SUGAR OF LEAD, White cwt.	37	0	..	38	0	37	6	..	38	6
Brown, cwt.	26	6	..	0	0	27	0	..	0	0
SULPHUR (*see* Brimstone)										
VERDIGRIS .... per lb.	1	1	to	1	5	1	1	to	1	5
VERMILION, English ,,	2	8	..	0	0	3	4	..	0	0
China ,,	2	2	..	0	0	3	0	..	3	1

DRUGS.

	1877.					1876.				
	s.	d.		s.	d.	s.	d.		s.	d.
ALOES, Hepatic ....per cwt.	70	0	..	180	0	70	0	..	160	0
Socotrine .. ,,	85	0	..	220	0	65	0	..	180	0
Cape, good.. ,,	49	0	..	51	0	49	0	..	50	0
Interior .... ,,	41	0	..	48	0	42	0	..	48	0
Barbadoes .. ,,	40	0	..	180	0	50	0	..	190	0
AMBERGRIS, grey........oz.	80	0	..	85	0	55	0	..	65	0
BALSAM—										
Canada............per lb.	1	0	..	0	0	1	3	..	0	0
Capivi .... ,,	1	5	..	1	6	1	6	..	1	9
Peru .... ,,	4	10	..	0	0	4	0	..	5	0
Tolu .... ,,	6	0	..	6	2	0	0	..	0	0
BARKS—										
Canella alba......per cwt.	18	0	..	22	6	20	0	..	24	6
Cascarilla .... ,,	15	6	..	23	0	16	0	..	21	0
Peru, crown & grey per lb.	1	6	..	8	1	1	2	..	3	0
Calisaya, flat ,,	3	6	..	4	6	2	6	..	5	0
,, quill ,,	4	6	..	7	0	2	9	..	4	11
Carthagena ,,	1	9	..	3	5	2	5	..	3	7
Columbian .. ,,	1	6	..	5	0	2	0	..	5	3
E. I. .... ,,	1	2	..	4	0	1	9	..	3	6
,, good & fine ,,	4	6	..	7	0	4	0	..	5	0
Pitayo ...... ,,	0	6	..	1	6	0	10	..	2	4
Red .... ,,	3	3	..	5	0	2	0	..	4	6
Buchu Leaves........ ,,	0	2½	..	0	3	0	1	..	1	1
CAMPHOR, China ..per cwt.	87	6	..	90	0	85	0	..	0	0
Japan .. ,,	92	6	..	95	0	87	6	..	0	0
Refin. Eng. per lb.	1	3	..	0	0	1	2	..	0	0
CANTHARIDES........ ,,	2	0	..	5	0	3	0	..	3	6
CHAMOMILE FLOWERS p. cwt.	50	0	..	200	0	45	0	..	150	0
CASTOREUM ....per lb.	9	0	..	30	0	7	0	..	25	0
DRAGON'S BLOOD, lp. p. cwt.	95	0	..	260	0	140	0	..	260	0
FRUITS AND SEEDS (*see also* Seeds *and* Spices).										
Anise, China Star per cwt.	92	0	..	102	6	85	0	..	105	0
Spanish, &c. ,,	30	0	..	45	0	28	0	..	40	0
Beans, Tonquin....per lb.	1	9	..	5	0	1	7	..	2	7
Cardamoms, Malabar good .... ,,	5	0	..	5	10	3	9	..	4	2
inferior.... ,,	1	6	..	4	5	0	9	..	3	8
Aleppy .... ,,	3	6	..	5	3	2	0	..	3	9
Madras.... ,,	2	2	..	3	6	1	1	..	3	5
Ceylon .... ,,	3	6	..	5	0	4	6	..	5	0
Cassia Fistula....per cwt.	80	0	..	89	0	10	0	..	32	0
Castor Seeds .... ,,	0	0	..	0	0	5	0	..	10	6
Cocculus Indicus ,,	9	3	..	11	0	9	0	..	11	0
Colocynth, apple ..per lb.	0	0	..	0	0	0	6	..	0	11
Croton Seeds ....per cwt.	30	0	..	0	0	35	6	..	36	6
Cubebs.......... ,,	26	0	..	27	0	30	0	..	0	0
Cummin .... ,,	20	0	..	31	0	15	0	..	26	0
Dividivi .... ,,	12	0	..	16	0	10	0	..	15	0
Fenugreek ...... ,,	6	0	..	13	0	9	0	..	12	0
Guinea Grains .. ,,	28	6	..	0	0	29	0	..	0	0
Juniper Berries ,,	8	0	..	10	0	8	0	..	10	0
Nux Vomica.. .. ,,	9	0	..	14	0	9	0	..	12	0
Tamarinds, East India ,,	0	0	..	0	0	10	0	..	15	6
West India ,,	25	6	..	27	6	10	0	..	15	6
Vanilla, large .... per lb.	23	0	..	28	0	26	0	..	40	0
inferior ,,	15	0	..	21	0	13	0	..	20	0
GINGER, Preserved, per lb.	0	4½	..	0	7	0	4	..	0	8
HONEY, Chili .... per cwt.	45	0	..	50	0	40	0	..	47	6
Jamaica ,,	38	0	..	43	0	35	0	..	46	0
Australian ,,	0	0	..	0	0	0	0	..	0	0
IPECACUANHA .... per lb.	5	6	..	6	0	4	0	..	4	6
ISINGLASS, Brazil.. ,,	3	0	..	5	2	2	7	..	5	2
Tongue sort ,,	3	6	..	5	7	3	0	..	5	6
East India ,,	2	6	..	5	6	1	6	..	4	9
West India ,,	4	2	..	4	10	4	4	..	4	11
Russ. long staple	8	0	..	15	0	9	0	..	12	6
,, inferior	0	0	..	0	0	0	0	..	0	0
,, Simovia	1	6	..	3	0	2	0	..	3	3
JALAP, good...... ,,	0	8	..	0	10	0	7	..	0	8
infer. & stems ,,	0	7	..	0	7½	0	6	..	0	6½
LEMON JUICE .... per degree	0	1¼	..	0	1½	0	1½	..	0	1½
LIME JUICE........per gall.	0	0	..	0	0	1	3	..	1	8
LIQUORICE, Spanish per cwt.	34	0	..	39	0	0	0	..	0	0
Liquorice Root ,,	0	0	..	0	0	12	0	..	30	0
MANNA, flaky ......per lb.	3	6	..	4	0	5	6	..	6	0
small ...... ,,	1	4	..	1	6	1	6	..	1	9
MUSK, Pod..........per oz.	23	0	..	50	6	19	0	..	49	0
Grain........ ,,	40	0	..	50	0	45	0	..	60	0
OILS (*see also separate list*)										
Almond, expressed per lb.	1	9	..	0	0	1	2	..	0	0
Castor, 1st pale.... ,,	0	5	..	0	0	0	4¼	..	0	4¾
second .... ,,	0	4½	..	0	4¾	0	3¼	..	0	4
Cod Liver ...... per gall.	4	0	..	5	0	5	6	..	7	6
Croton .... per oz.	0	2½	..	0	2¾	0	2½	..	0	0
Essential Oils:										
Almond ....per lb.	25	0	..	0	0	20	0	..	0	0
Anise-seed ...... ,,	6	3	..	6	4	6	6	..	6	9
Bay ....per cwt.	0	0	..	0	0	65	0	..	70	0
Bergamot ...... per lb.	10	0	..	15	0	10	0	..	15	0
Cajeput......per bottle	3	0	..	3	6	2	9	..	3	0
Caraway........per lb.	9	0	..	9	3	9	0	..	9	3
Cassia.......... ,,	3	2	..	3	3	3	10	..	4	0
Cinnamon ......per oz.	2	6	..	5	6	2	6	..	6	6
Cinnamon-leaf .. ,,	0	2¼	..	0	3	0	2½	..	0	4
Citronelle ...... ,,	0	2¼	..	0	0	0	2	..	0	0
Clove .... ,,	8	3	..	0	0	9	0	..	0	0
Juniper .... ,,	0	0	..	0	0	0	0	..	0	0
Lavender ......per lb.	1	8	..	7	0	1	8	..	7	0
Lemon.......... ,,	7	0	..	9	6	7	0	..	9	0
Lemongrass ....per oz.	0	2½	..	0	2¾	0	2½	..	0	0

	1877.			1876.		
Essential Oils, *continued*:—	s. d.		s. d.	s. d.		s. d.
Neroli per oz.	3 0	to	6 6	3 0	to	6 6
Nutmeg ,,	0 5	..	0 0	0 7	..	0 7½
Orange per lb.	6 0	..	9 0	6 0	..	9 0
Otto of Roses per oz.	16 0	..	22 0	13 0	..	25 0
Patchouli ,,	1 9	..	3 0	2 0	..	3 6
Peppermint:						
American per lb.	13 0	..	14 3	12 6	..	14 9
English ,,	24 6	..	25 0	34 0	..	35 0
Rosemary ,,	2 0	..	2 6	2 0	..	2 6
Sassafras ,,	2 3	..	2 6	2 3	..	2 6
Spearmint ,,	12 0	..	15 0	14 0	..	16 0
Thyme ,,	0 0	..	0 0	0 0	..	0 0
Mace, expressed ..per oz.	0 6	..	0 10	0 6	..	0 10
OPIUM, Turkey per lb.	16 6	..	18 6	19 6	..	21 6
inferior ,,	10 0	..	12 0	9 0	..	18 0
QUASSIA (bitter wood) per ton	100 0	..	130 0	100 0	..	140 0
RHUBARB, China, good and fine per lb.	2 6	..	3 0	3 2	..	4 5
Mid. to ord. ,,	0 9	..	2 3	0 8	..	2 11
Dutch Trimmed.. ,,	0 0	..	0 0	0 0	..	0 0
ROOTS—Calumba..per cwt.	23 0	..	38 0	18 0	..	26 0
China ,,	30 0	..	32 0	22 0	..	24 0
Chiretta per lb.	0 3	..	0 4	0 3½	..	0 4
Galangal per cwt.	20 0	..	21 0	19 0	..	22 0
Gentian ,,	20 0	..	22 0	23 0	..	24 0
Hellebore ,,	0 0	..	0 0	0 0	..	0 0
Orris ,,	55 0	..	65 0	26 0	..	75 0
Pellitory ,,	70 0	..	76 0	70 0	..	76 0
Pink per lb.	0 0	..	0 0	0 0	..	0 0
Rhatany ,,	0 4	..	0 8	0 4	..	1 0
Seneka ,,	3 0	..	3 6	3 6	..	4 0
Snake ,,	0 8	..	0 10	0 6	..	0 7
SAFFRON, Spanish .. ,,	30 0	..	32 0	22 0	..	36 0
SALEP per cwt.	240 0	..	300 0	0 0	..	0 0
SARSAPARILLA, Lima per lb.	0 0	..	0 0	0 5	..	0 7
Guayaquil ,,	2 2	..	2 6	1 9	..	2 0
Honduras ,,	0 11	..	1 6	1 0	..	1 6
Jamaica ,,	1 3	..	2 6	2 9	..	3 0
SASSAFRAS per cwt.	9 0	..	11 0	0 0	..	0 0
SCAMMONY, Virgin ..per lb.	0 0	..	0 0	24 0	..	30 0
second & ordinary ,,	0 0	..	0 0	6 0	..	22 0
SENNA, Bombay ,,	0 1	..	1 6	0 1	..	0 4
Tinnivelly ,,	0 1	..	1 6	0 2⅛	..	2 0
Alexandria ,,	0 5	..	2 0	0 5	..	2 8
SPERMACETI, refined ,,	1 4	..	0 0	1 4	..	0 0
American ,,	1 2	..	0 0	1 0	..	1 2
SQUILLS ,,	0 2½	..	0 3½	0 2	..	0 3

GUMS.

	£ s.		£ s.	£ s.		£ s.
AMMONIACI drop .. per cwt.	2 2	..	2 6	2 2	..	2 10
lump.. ,,	0 17/6	..	1 14	1 0	..	1 14
ANIMI, fine washed ,,	11 0	..	12 15	11 0	..	12 10
bold scraped ,,	9 15	..	10 15	9 10	..	10 15
sorts ,,	6 15	..	9 10	6 10	..	9 5
dark ,,	4 0	..	6 12/6	4 0	..	6 0
ARABIC, E.I., fine pale picked .. ,,	3 0	..	3 16	3 0	..	4 0
srts., md. to fin. ,,	2 5	..	2 17/6	2 9	..	2 18
garblings .. ,,	1 6	..	2 0	1 1	..	2 4
TURKEY, pick. gd. to fin. ,,	6 0	..	9 10	6 10	..	10 15
second & inf. ,,	3 0	..	5 15	3 0	..	6 10
in sorts .. ,,	2 10	..	3 16	2 5	..	3 5
Gedda ,,	1 15	..	3 0	1 6	..	1 10
BARBARY, white .. ,,	0 0	..	0 0	2 4	..	2 8
brown .. ,,	2 1	..	2 6	1 12	..	1 16
AUSTRALIAN ,,	1 19	..	2 15	1 15	..	2 7
ASSAFŒTIDA, cm. to fin ,,	0 16	..	4 0	0 18	..	2 10
BENJAMIN, 1st & 2nd ,,	0 0	..	0 0	10 0	..	39 0
Sumatra 1st & 2nd ,,	6 10	..	12 0	6 10	..	15 0
3rd	3 0	..	5 5	3 10	..	5 6
COPAL, Angola red ,,	6 0	..	6 15	6 0	..	6 15
Benguela ,,	4 0	..	5 0	4 0	..	5 0
	s. d.		s. d.	s. d.		s. d.
Sierra Leone, per lb.	0 6	..	0 9	0 6	..	0 11
Manilla per cwt.	18 0	..	27 0	15 0	..	27 0
DAMMAR, pale ,,	75 0	..	77 6	66 0	..	68 0
Singapore ,,	70 0	..	75 0	65 0	..	65 0
EUPHORBIUM ,,	9 0	..	15 0	11 0	..	16 0
GALBANUM per lb.	0 0	..	1 3	0 5	..	1 3
GAMBOGE, pckd. pipe per cwt.	200 0	..	270 0	220 0	..	270 0
GUAIACUM per lb.	1 10	..	2 5	1 3	..	3 0
KINO per cwt.	40 0	..	50 0	40 0	..	50 0
KOWRIE, rough .. ,,	24 0	..	44 0	32 0	..	58 0
scraped sorts ,,	46 0	..	55 0	60 0	..	70 0
MASTIC, picked per lb.	4 0	..	5 0	4 0	..	5 0
MYRRH, gd. & fine per cwt.	152 0	..	240 0	160 0	..	170 0
ord. to fair ,,	80 0	..	130 0	100 0	..	150 0
OLIBANUM, p. drop ,,	46 0	..	51 0	50 0	..	54 0
amber & ylw. ,,	34 0	..	45 0	36 0	..	50 0
garblings ,,	10 0	..	28 0	15 0	..	26 0
SENEGAL ,,	60 0	..	0 0	60 0	..	65 0
SANDARAC ,,	85 0	..	100 0	75 0	..	85 0
SHELLAC, Orange.. ,,	77 0	..	91 0	100 0	..	160 0
Liver .. ,,	74 0	..	80 0	90 6	..	105 0
THUS ,,	20 0	..	21 6	20 0	..	21 6
TRAGACANTH, leaf ,,	240 0	..	400 0	240 0	..	400 0
in sorts ,,	25 0	..	175 0	25 0	..	175 0

OILS.

	£ s.		£ s.	£ s.		£ s.
SEAL, pale per tun	34 0	..	0 0	33 10	..	34 0
yellow to tinged ,,	30 10	..	33 0	31 0	..	33 0
brown ,,	29 0	..	30 0	29 10	..	0 0
SPERM ,,	78 0	..	0 0	90 0	..	0 0
BODY ,,	0 0	..	0 0	0 0	..	0 0
COD ,,	35 0	..	0 0	42 0	..	42 10

	1877.			1876.		
Oils, *continued*:—	£ s.		£ s.	£ s.		£ s.
WHALE, SouthSea, pale, per tun	35 0	to	0 0	34 10	to	35 0
yellow ,,	33 0	..	34 0	32 0	..	34 0
brown ,,	30 0	..	31 0	28 0	..	30 0
East India, Fish ,,	25 10	..	0 0	26 10	..	0 0
OLIVE, Galipoli per ton	0 0	..	0 0	48 10	..	0 0
Gioja ,,	0 0	..	0 0	47 10	..	48 0
Levant ,,	49 0	..	0 0	0 0	..	0 0
Mogador ,,	48 0	..	0 0	0 0	..	0 0
Spanish ,,	50 0	..	50 10	0 0	..	0 0
Sicily ,,	49 0	..	50 0	0 0	..	0 0
COCOANUT, Cochin.. ,,	43 10	..	43 15	41 10	..	42 0
Ceylon ,,	38 15	..	39 0	38 0	..	0 0
Mauritius ,,	0 0	..	0 0	33 0	..	37 10
GROUND NUT AND GINGELLY:						
Bombay	0 0	..	0 0	0 0	..	0 0
Madras	0 0	..	0 0	37 0	..	0 0
PALM, fine	40 10	..	0 0	40 10	..	41 0
LINSEED	29 5	..	29 10	26 0	..	0 0
RAPESEED, English, pale ..	39 5	..	0 0	39 15	..	0 0
brown	37 15	..	0 0	37 15	..	0 0
Foreign, pale ..	0 0	..	0 0	40 15	..	41 0
brown	0 0	..	0 0	0 0	..	0 0
COTTONSEED	32 10	..	0 0	31 0	..	0 0
LARD	52 0	..	0 0	56 0	..	0 0
TALLOW	30 0	..	54 0	31 0	..	46 0
	s. d.		s. d.	s. d.		s. d.
TURPENTINE, American, cks.	23 6	..	23 9	25 0	..	25 3
French ,,	0 0	..	0 0	0 0	..	0 0
PETROLEUM, Crude	0 0	..	0 0	0 0	..	0 0
refined, per gall.	1 11⅝	..	0 11¾	1 6	..	0 0
Spirit ,,	0 8¼	..	0 9	1 1	..	0 0

SEEDS.

CANARY per qr.	52 0	..	60 0	72 6	..	85 0
CARAWAY, English per cwt.	43 0	..	45 0	44 0	..	45 0
German, &c.	48 0	..	49 0	0 0	..	0 0
CORIANDER	18 0	..	23 0	12 0	..	21 0
HEMP per qr.	0 0	..	0 0	40 0	..	45 0
LINSEED, English ,,	0 0	..	0 0	0 0	..	0 0
Black Sea & Azof	57 0	..	0 0	53 0	..	0 0
Calcutta ,,	54 0	..	0 0	53 0	..	0 0
Bombay ,,	57 0	..	0 0	54 0	..	0 0
St. Petrsbrg. ,,	53 0	..	54 0	0 0	..	0 0
Mustard, brown..per bshl.	0 0	..	0 0	12 0	..	15 0
white.. ,,	16 0	..	18 0	13 0	..	16 0
POPPY, East India, per qr.	56 0	..	0 0	48 0	..	49 0

SPICES.

CASSIA LIGNEA ..per cwt.	44 0	..	60 0	52 0	..	65 0
Vera ,,	22 0	..	45 0	22 0	..	44 0
Buds ,,	70 0	..	73 0	82 0	..	85 0
CINNAMON, Ceylon:						
1st quality per lb.	2 1	..	3 8	2 2	..	4 2
2nd do. ,,	1 10	..	2 10	1 9	..	3 0
3rd do. ,,	1 9	..	2 5	1 6	..	2 9
Tellicherry ,,	2 6	..	2 10	2 9	..	3 0
CLOVES, Penang ,,	2 0	..	0 0	2 2	..	0 0
Amboyna ,,	1 4	..	1 6	1 7	..	1 9
Zanzibar ,,	1 2	..	1 3	1 1	..	1 3
GINGER, Jam., fine per cwt.	91 0	..	202 6	93 0	..	202 6
Ord. to good ,,	53 0	..	90 0	56 0	..	92 0
African ,,	25 0	..	26 0	29 0	..	0 0
Bengal ,,	22 0	..	22 6	25 0	..	26 0
Malabar ,,	26 0	..	28 0	0 0	..	0 0
Cochin ,,	50 0	..	115 0	50 0	..	115 0
PEPPER, Blk, Malabar, per lb.	0 4½	..	0 5½	0 4⅛	..	0 5⅛
Singapore ,,	0 3¼	..	0 0	0 4	..	0 4¼
White Tellicherry ,,	0 10	..	1 4	0 10	..	1 4
Cayenne ,,	1 6	..	3 0	2 0	..	2 8
MACE, 1st quality .. ,,	2 4	..	3 4	2 3	..	3 3
2nd and inferior .. ,,	1 0	..	2 3	1 0	..	2 2
NUTMEGS, 78 to 60 to lb. ,,	3 11	..	4 6	3 9	..	4 9
90 to 80 ,, ,,	3 3	..	3 10	3 2	..	3 8
132 to 95 ,, ,,	2 1	..	3 2	2 3	..	3 1
PIMENTA	0 4½	..	0 4¾	0 4	..	0 4¼

VARIOUS PRODUCTS.

COCHINEAL—						
Honduras, black ..per lb.	1 11	..	2 4	2 5	..	2 8
,, silver .. ,,	1 11	..	2 1	2 3	..	2 6
,, pasty .. ,,	1 10	..	0 0	0 0	..	0 0
Mexican, black ,,	1 11	..	2 0	2 4	..	2 5
,, silver ,,	1 9	..	1 10	2 2	..	3 3
Teneriffe, black .. ,,	1 11	..	2 10	2 3	..	3 3
,, silver .. ,,	1 10	..	2 2	2 3	..	2 6
SOAP, Castile per cwt.	26 0	..	33 0	33 0	..	34 0
SOY, China ,, gall.	2 0	..	2 1	1 8	..	1 9
SPONGE, Turk. fin. pkd pr lb.	0 0	..	0 0	12 0	..	16 0
Fair to good ,,	0 0	..	0 0	4 0	..	11 0
Ordinary .. ,,	0 0	..	0 0	1 0	..	3 0
Bahama ,,	0 0	..	0 0	0 6	..	3 0
TERRA JAPONICA—						
Gambier per cwt.	19 6	..	0 0	22 0	..	22 6
Free cubos ,,	29 6	..	30 6	35 0	..	37 0
Cutch ,,	23 0	..	25 6	25 6	..	27 0
WOOD, DYE, Bar ..per ton	£3 7/6	..	£3 10	£3 2/6	..	3 5
Brazil ,,	14 0	..	20 0	0 0	..	0 0
Cam ,,	18 0	..	33 0	20 0	..	32 10
Fustic, Cuba ,,	8 0	..	8 10	8 10	..	9 0
Jamaica ,,	5 15	..	6 0	5 0	..	5 10
LOGWOOD, Campeachy ,,	8 15	..	9 0	9 0	..	10 0
Honduras ,,	6 10	..	6 15	7 0	..	8 0
St. Domingo ,,	5 10	..	5 15	5 10	..	6 10
Jamaica ,,	5 0	..	5 5	5 5	..	6 0
LIMA, first pile ,,	9 15	..	10 0	8 0	..	9 0
RED SANDERS ,,	6 10	..	0 0	6 0	..	0 0

NOTES AND QUERIES

W. H. H.—We do not remember the paragraph you allude to. You are almost as bad as the Egyptian king who, having forgotten his dream, expected others to remember it for him, as well as interpret it. Glucose is best made by allowing a mixture of starch and water to flow gradually into boiling water containing 1 per cent. of sulphuric acid. Two parts of acidulated water will by this means convert 1 part of starch.

W. A. O.—We have never heard of any law which prohibits a tradesman from supplying alum to bakers or millers. The idea has probably arisen from hearing of the law (which does exist) subjecting a druggist to a penalty of *500l.* if he supply grains of paradise or cocculus indicus to a brewer.

Pops (Dentifrice Perfumes).—Oil of peppermint is used in most of the liquid dentifrices, or mouth washes, combined with spices, such as myrrh and cloves, or with other essential oils. Oil of cloves, nutmeg, and rose in equal parts form a pleasant aromatic perfume for tooth paste. The following formula for a balsamic dental fluid may probably give you some hints:—

Orange peel	2 ozs.
Lemon peel	2 ,,
Pomegranate bark	2 ,,
Angelica root	2 ,,
Guaiacum	5 ,,
Pyrethrum	6 ,,
Benzoin	2 ,,
Tolu	2 ,,
Cloves	2 ,,
Cinnamon	0½ ,,
Vanilla	0½ ,,
Myrrh	0½ ,,
Alcohol	2 quarts

Macerate for a week, filter, and add

Tincture of cochlearia	1 pint
Oil of peppermint	6 drms.

Subscriber.—The Petroleum Act, though fixed to expire with each year, is kept in force by the Expiring Acts Continuance Act, which is regularly passed at the close of every session.

An Irish Chemist asks if there is any objection to an Irish pharmacist using the English pharmaceutical arms. Morally there is the same objection that there would be to an Irish gentleman appropriating an English gentleman's spoons. Legally, the case is a little more complicated. Strictly speaking, no one, not even a member of the society, has a *right* to use the arms. Their employment might be confined to the council acting in its corporate capacity. We may add, too, that everyone using these is subject to the duty on armorial bearings. The 12th clause of the Pharmacy Act of 1852 also prevents any person in Great Britain not a member of the society from assuming any sign implying that he is in connection with it. That clause, however, could not be applied to an Irish case. We imagine, however, that the grant of arms to the society by royal charter would be sufficient to give the society an exclusive claim to the same in any part of the British Empire. We are not able, however, to support our belief by legal authority.

Multus.—(1.) Copaiba is very liable to deterioration in consequence of the loss of volatile oil. It should be kept in the cool and well corked. The fresher it is the more marked are its medicinal qualities. (2.) The preservation of the flavour of all essential oils depends so much on how they are kept that it is impossible to fix any definite time as that at which they begin to deteriorate. They are doubtless finest in flavour within the first year after distillation. (3.) Glycerine has demulcent properties, and so far should be a useful addition to a cough mixture.

Australia asks: "Can a druggist, registered under the Victorian Pharmacy Act, come to England and start business without undergoing an examination?"—No; the English Act does not recognise officially any official registration.

Inquirer wishes to know what is the best way of treating a subcutaneous syringe, the piston of which gets out of order owing to contraction of the material which covers it. It would have simplified the question if the covering material had been named.

Juvenis wants something which will replace spirit in the preservation of a vegetable decoction or infusion. It is not a pharmacopœial preparation, but we suppose is intended for internal administration. Probably salicylic acid would answer the purpose. It is only soluble in 600 parts of cold water, so that the maximum quantity which could be added to a pint of infusion is 16 grains. A convenient method of using it would be to dissolve 1 ounce of the acid in 2 ounces of absolute alcohol, and add 30 minims of the solution to each pint of the infusion while still warm.

Mr. Cocking (Sittingbourne) writes:—"A little practical and successful experience as to the grinding of seeds and roots would be very acceptable to the trade, how to reduce fenugreek, gentian, and aniseeds to a really fine powder, and in a rapid manner. Steel mills very soon wear out; stone seem most successful, but are very ponderous, and require almost a steam engine to work them. Many sell large quantities of horse powders, and to compare price of whole seeds and ground is somewhat startling, to say nothing of quality."

Mr. E. H. Laffere.—We can only insert such items as that contained in your letter in the form of inquiries under the "Personal" heading of our Exchange Column.

W. J.—The only book we can call to mind which refers to aniline dyes is "A Handbook of Dyeing and Calico Printing," by W. Crookes, 8vo., published by Longmans, Green & Co.

G. Morgan, Jun., writes:—"Would someone kindly inform me what the benzole, mentioned in THE CHEMIST AND DRUGGIST of October, really is?" As Charles Kingsley once said, in a free country no one is bound to understand himself or let others understand him. But we wish our correspondents would endeavour as much as possible to save our valuable time. It would have cost no more labour to indicate in which page and paragraph benzole is mentioned. It is not so conspicuous that one cannot overlook it, for in glancing through the number just now we failed to find it. The paragraph G. Morgan refers to is probably that which describes the manufacture of paraffin paper, on p. 402. We should have imagined that the words "commercial benzole" were sufficiently definite if it is required to purchase the article. If the chemical composition is wanted, the question should have been so stated. Commercial benzole, otherwise called benzoline and benzin, is a mixture of various hydrocarbons of light specific gravity, obtained in the distillation of coal tar and petroleum. It must be carefully distinguished from benzol or phenyl hydride, which is a chemical compound of definite composition. Should this not be what G. Morgan wants we will gladly endeavour to find the information he desires if he will only tell us what it is.

J. R. wishes to know title, publisher, and price of the best work on the chemical analysis of the ordinary commercial chemicals. In our opinion, Sutton's "Volumetric Analysis," published by Churchill, at 15*s.*, is the handiest and most convenient work on the subject in the English tongue.

A Lancashire Chemist has forwarded us a paragraph recording the success of Mr. ——, "Chemist," the son of Mr. ——, of ——, in passing one of his "professional" examinations, which is, in fact, the Preliminary, and also stating that he has been registered as a student of the "Pharmaceutical Society of Great Britain." The impudence of this paragraph excites our correspondent's ire, and he asks us to notice it. The young gentleman concerned evidently wishes to depreciate the occupation on which he is entering, for he assumes the name of chemist after passing what most people have learned to consider a too simple examination. Such paltry schemes at self-aggrandisement deserve nothing but good-natured contempt, and are so universally despised that we generally find that the parties interested profess great astonishment that the paragraph has got into the journal. Of course the practice is an offence against the ethics of pharmacy, but it has so little public support that it hardly deserves serious treatment.

Salix wishes:—(1.) For a plan of preserving ergot powdered and whole. If he will refer to the October number of THE CHEMIST AND DRUGGIST, p. 39, he will find an abstract of an article which appeared in the *Journal de Thérapeutique.* The author found that the admixture of 5 per cent. of powdered benzoin was sufficient to preserve powdered ergot for fourteen months in a bottle whose mouth was only covered by a card. (2.) Also for a formula for the aniseed or peppermint which is given to young children as a carminative. The composition of this preparation is probably hardly the same in two shops. A considerable quantity of essential oil may be dissolved clearly in syrup if the oil is shaken with the syrup heated in a water bath. The distilled waters are, however, often sold for the purpose; dose, a teaspoonful. (3.) Glycerole of lead is made as follows:—Rub 1 drachm of camphor to powder with spirit, dissolve it by heat in 13½ ozs. of glycerine, and when cold add 2½ ozs. of liq. plumbi subacet. (4.) Phosphorus pills are not usually made by rubbing down the phosphorus with bisulphide of carbon in a mortar. We are not surprised that our correspondent finds that when so made they do not contain their full amount of phosphorus. Indeed, we are somewhat astonished that he has not had to call in the aid of the Fire Brigade as a result of his experiment. A solution of phosphorus in bisulphide of carbon is commonly known as Greek fire, and is one of the most dangerously inflammable materials known. The method of making these pills, as described in the Addenda to the Pharmacopœia, is as follows: Put 2 grains of phosphorus and 120 grains of balsam of tolu into a Wedgwood mortar about half full of hot water. When the phosphorus is melted and the balsam is sufficiently softened, rub them together until no globules of phosphorus are visible. Then add 60 grains of wax, and as it softens incorporate it. Keep the water at about 140° Fahr. during the operation. Allow the mass to cool without being exposed to the air, and keep it in a bottle immersed in cold water. It may be softened with a few drops of rectified spirit when required to be made into pills.